



SAN FRANCISCO PLANNING DEPARTMENT

DATE: February 25, 2009

TO: Distribution List for the 1415 Mission Street Mixed Use Development Project
Draft Environmental Impact Report

FROM: Bill Wycko, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report for the 1415 Mission Street
Mixed Use Development Project (Case No. 2005.0540E)

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

This is the Draft Environmental Impact Report (EIR) for the 1415 Mission Street Mixed Use Development Project. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, our office will prepare and publish a document entitled "Comments and Responses," which will contain a summary of all relevant comments on this Draft EIR and our responses to those comments, along with copies of the letters received and a transcript of the public hearing. The Comments and Responses document may also specify changes to this Draft EIR. Public agencies and members of the public who testify at the hearing on the Draft EIR or provide written comments will automatically receive a copy of the Comments and Responses document, along with notice of the date reserved for certification; others may receive such copies and notice on request or by visiting our office. This Draft EIR, together with the Comments and Responses document, will be considered by the Planning Commission in an advertised public meeting, and then certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final Environmental Impact Report. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one rather than two documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Comments and Responses document have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR, in Adobe Acrobat format on a compact disk (CD), to private individuals only if they request them. Therefore, if you would like a copy of the Final EIR, please fill out and mail the postcard provided inside the back cover to the Major Environmental Analysis division of the Planning Department within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy.

Thank you for your interest in this project.

PAGE INTENTIONALLY LEFT BLANK

City and County of San Francisco
Planning Department

1415 MISSION STREET MIXED USE DEVELOPMENT

DRAFT ENVIRONMENTAL IMPACT REPORT

Planning Department Case No. 2005.0540E

State Clearinghouse No. 2007122101

Draft EIR Publication Date: February 25, 2009

Draft EIR Public Hearing Date: April 9, 2009

Draft EIR Public Comment Period: February 25 to April 13, 2009

Please send written comments on this document to:

Bill Wycko
Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

PAGE INTENTIONALLY LEFT BLANK

1415 Mission Street Mixed Use Development Draft Environmental Impact Report

Table of Contents

| | <i>Page</i> |
|---|-------------|
| List of Acronyms and Abbreviations | iv |
| I. Summary | 1 |
| A. Introduction | 1 |
| B. Project Description | 1 |
| C. Main Environmental Effects | 3 |
| D. Mitigation and Improvement Measures | 13 |
| E. Other CEQA Issues | 20 |
| F. Alternatives to the Proposed Project | 22 |
| II. Project Description | 29 |
| A. Project Location | 29 |
| B. Project Characteristics | 30 |
| C. Project Sponsor's Objectives | 40 |
| D. Project Approval Requirements | 40 |
| E. Plans and Policies | 41 |
| III. Environmental Setting and Impacts | 53 |
| A. Land Use | 53 |
| B. Aesthetics | 62 |
| C. Transportation | 75 |
| D. Noise | 101 |
| E. Air Quality | 105 |
| F. Wind | 110 |
| G. Shadow | 122 |
| IV. Mitigation and Improvement Measures | 131 |
| V. Other CEQA Issues | 139 |
| A. Growth Inducement | 139 |
| B. Greenhouse Gas Emissions | 139 |
| C. Significant Environmental Effects That Cannot Be Avoided If the Proposed Project is Implemented | 151 |
| D. Areas of Controversy and Issues to be Resolved | 152 |
| VI. Alternatives to the Proposed Project | 153 |
| A. Alternative A: No Project | 154 |
| B. Alternative B: Existing Zoning | 155 |
| C. Alternative C: Reduced Scale | 158 |
| D. Alternatives Considered and Rejected | 159 |
| E. Environmentally Superior Alternative | 160 |
| VII. EIR Preparers and Persons and Organizations Contacted | 161 |

| | <i>Page</i> |
|-------------------------|-------------|
| VIII. Appendices | 165 |
| A. Initial Study | |
| B. Transportation | |
| C. Wind | |

List of Figures

| | | |
|-----------|---|-----|
| Figure 1 | Project Location | 31 |
| Figure 2 | Proposed Ground Floor Plan..... | 33 |
| Figure 3 | Proposed Second to Fourth Level Floor Plans | 34 |
| Figure 4 | Proposed Fifth to Eighth Level Floor Plans | 35 |
| Figure 5 | Proposed Ninth to Fourteenth Level Floor Plans | 36 |
| Figure 6 | Proposed Basement Level B1 Parking Plan | 37 |
| Figure 7 | Proposed Mission Street (North) Elevation..... | 38 |
| Figure 8 | Proposed Tenth Street (East) Elevation..... | 39 |
| Figure 9 | Zoning Use and Height & Bulk Districts | 44 |
| Figure 10 | Existing Land Uses in the Project Vicinity | 54 |
| Figure 11 | Residential Developments in the Vicinity | 57 |
| Figure 12 | Viewpoint Locations | 65 |
| Figure 13 | View Looking South on Tenth Street near Market Street | 66 |
| Figure 14 | View Looking East on Mission Street at Eleventh Street..... | 67 |
| Figure 15 | View Looking West on Mission Street at Ninth Street..... | 68 |
| Figure 16 | View Looking North on Tenth Street near Howard Street..... | 69 |
| Figure 17 | Transportation Study Area | 76 |
| Figure 18 | Muni and Regional Transportation and Stop Locations..... | 81 |
| Figure 19 | Bicycle Lanes and Routes in the Project Area | 86 |
| Figure 20 | Wind Measurement Locations | 114 |
| Figure 21 | Proposed Project Shadow: December..... | 124 |
| Figure 22 | Proposed Project Shadow: March | 125 |
| Figure 23 | Proposed Project Shadow: June | 126 |
| Figure 24 | Proposed Project Shadow: September..... | 127 |

List of Tables

| | | |
|---------|---|-----|
| Table 1 | Project Characteristics | 32 |
| Table 2 | Intersection Levels of Service: Existing (2006) Weekday P.M. Peak Hour..... | 79 |
| Table 3 | MUNI Screenline Analysis, Existing P.M. Peak Hour Conditions..... | 83 |
| Table 4 | Intersection Level of Service: Existing, Existing Plus Project, and Future Cumulative — Weekday P.M. Peak Hour | 91 |
| Table 5 | MUNI Screenline Analysis Existing Plus Proposed Project, P.M. Peak Hour Conditions | 93 |
| Table 6 | Regional Provider Screenline Analysis Existing Plus Proposed Project, P.M. Peak Hour..... | 94 |
| Table 7 | Wind Hazard Conditions..... | 115 |
| Table 8 | Wind Comfort Conditions | 117 |

List of Acronyms and Abbreviations

| | |
|---------------------|---|
| ABAG | Association of Bay Area Governments |
| ADRP | archeological data recovery program |
| ATP | archeological testing plan |
| BAAQMD | Bay Area Air Quality Management District |
| BART | Bay Area Rapid Transit |
| C-3-G | Downtown General Commercial |
| C-3-S | Downtown Support |
| CARB | California Air Resources Board |
| CD | compact disk |
| CEC | California Energy Commission |
| CEQA | California Environmental Quality Act |
| CH ₄ | methane |
| C-M | Heavy Commercial |
| CO ₂ | carbon dioxide |
| CO ₂ -eq | carbon dioxide equivalents |
| dBA | decibels, A-weighted scale |
| DBI | San Francisco Department of Building Inspection |
| DPH | San Francisco Department of Public Health |
| DPW | San Francisco Department of Public Works |
| EIR | Environmental Impact Report |
| ERO | Environmental Review Officer |
| FAR | Floor Area Ratio |
| FARR | Final Archeological Resources Report |
| GHG | greenhouse gas |
| H&S Plan | Health and Safety Plan |
| HMUPA | Hazardous Material Unified Program Agency |
| LOS | Level of Service |
| MLD | Most Likely Descendent |
| MUD | mixed-use development |
| Muni | San Francisco Municipal Railway |
| NAHC | Native American Heritage Commission |
| NO _x | nitrogen oxides |
| NWIC | California Archeological Site Survey Northwest Information Center |
| OSHA | Occupational Safety and Health Administration |
| RED | Residential Enclave District |
| RH-3 | Residential House, Three-Family |
| SFFD | San Francisco Fire Department |
| SFMTA | San Francisco Municipal Transportation Agency |
| SLR | Service/Light Industrial/Residential |
| sq.ft. | square feet |
| TAC | toxic air contaminant |
| TDR | transfer of development rights |
| UST | underground storage tank |

I. SUMMARY

A. INTRODUCTION

This is the Draft Environmental Impact Report (EIR) for the 1415 Mission Street mixed use development (the “proposed project”), prepared in accordance with the California Environmental Quality Act (CEQA), specifically for the 1415 Mission Street Mixed Use Development (MUD). The project sponsor, R & K Investments, proposes to demolish the existing one-story commercial building, remove the existing paved surface parking lot, and construct a 14-story mixed use building with approximately 2,742 square feet (sq.ft.) of ground-floor commercial space and 117 residential units. This EIR describes the environmental effects of the proposed 1415 Mission Street mixed use development to allow the Planning Commission to make an informed decision regarding approval of the project. The EIR also serves to respond to comments raised by interested parties.

B. PROJECT DESCRIPTION (page 29)

The 1415 Mission Street mixed use development project site is in San Francisco’s South of Market neighborhood on the southwest corner of Mission and Tenth Streets (Assessor’s Block 3510, Lot 001). The approximately square-shaped site is on the block bounded by Mission Street (north), Tenth Street (east), Howard Street (south), and Eleventh Street (west). The project site is within a Heavy Commercial (C-M) Use district and a 130-L Height and Bulk district. The approximately 11,424-square-foot (-sq.ft.) project site is essentially level and contains a one-story, 18-foot-tall, approximately 5,000-sq.ft. commercial building and a paved surface parking lot. The site was last occupied by a tire sales and repair business and is currently used as an attended indoor/outdoor 20-space parking facility.

The proposed project would demolish the existing building and parking lot and construct a 14-story, 130-foot-tall residential/commercial building with approximately 2,742 sq.ft. of ground-floor commercial space, 117 residential units on the upper floors, and a three-level, subterranean garage with up to 46 independently accessible or 101 valet residential parking spaces, and 15 commercial parking spaces (see Figures 2 through 8, pages 33 to 39). The new building would be approximately 168,194 sq.ft., of

I. SUMMARY

which 122,073 sq.ft. would be residential, 2,742 sq.ft. would be commercial, 29,343 sq.ft. would be occupied by the three-level subterranean parking garage, 5,139 sq.ft. would be residential circulation space (hallways, stairways, etc.), 2,608 sq.ft. would be amenities, and 6,289 sq.ft. would be mechanical space. The gross floor area¹ of the project subject to the Floor Area Ratio (FAR) limit, discussed on page 45, would be 97,860 sq.ft.

The residential unit mix is proposed to include about 26 studio units, 39 one-bedroom units, and 52 two-bedroom units. Per the Inclusionary Housing Ordinance (San Francisco *Planning Code*, Section 315), 18 units, or approximately 15 percent, would be designated on site as affordable units.

The ground floor of the building would comprise a residential lobby facing Mission Street and 2,742 sq.ft. of commercial space at the corner of Mission and Tenth Streets. An approximately 100-sq.ft. building management office, a fitness center, and a secure 42-space bicycle storage area would be located inside the building on the ground floor, accessible via the residential lobby. Screened entrances to a street-level freight and service loading area and an underground parking garage would be located on the building's Tenth Street frontage.

The building would be 14 stories and 130 feet in height, with a mechanical penthouse rising an additional 16 feet. Approximately 2,453 sq.ft. of common usable open space would be provided at the penthouse (roof) level for the use of residents. Seventy-six of the 117 dwelling units would have access to private open space in the form of balconies or terraces, totaling approximately 4,200 sq.ft. There also would be a 58-sq.ft. plaza for the retail use, which would not count toward open space square footages for Code purposes. The proposed project would include street trees along both the Mission and Tenth Street frontages. Constructing the three-level underground parking structure would require excavating approximately 35 feet below the existing ground surface and removing about 14,800 cubic yards of soil from the site. If approved, construction of the proposed project would occur over approximately 24 months. The project sponsor is R & K Investments and the project architect is Heller Manus Architects.

The proposed project would require a Zoning Map Amendment under *Planning Code* Section 302, Planning Code Amendments, to reclassify the project site from a C-M (Heavy Commercial) to a C-3-G (Downtown General Commercial) Use district (Planning Commission recommendation, Board of Supervisors approval, and signature by the Mayor). Because the proposed project (if rezoned) would include construction in a C-3 district, it would require approval under Section 309 of the *Planning Code*,

¹ Gross floor area is defined in Section 102.9 of the *Planning Code*. Ground-floor retail space, accessory parking, loading, and mechanical space is not considered part of the building's gross floor area. With a Conditional Use authorization, affordable units may also be exempted from the definition of gross floor area.

Permit Review in C-3 Use Districts. The project sponsor is seeking exceptions under Section 309 for accessory parking above the principal permitted amount, from rear yard requirements, and for curb-cut location on Tenth Street (Planning Commission, San Francisco Municipal Transportation Agency [SFMTA]). The project sponsor would seek Conditional Use authorization under Code Sections 303(c) and 215 for dwelling-unit density in excess of one unit per 125 sq.ft. of lot area pursuant to *Planning Code* Section 215(b), to exempt the floor area of on-site below-market-rate units from the FAR limit pursuant to *Planning Code* Section 124(f) (Planning Commission). The project would require a Variance from the dwelling unit exposure requirement (described on page 45) for an open area at the southeastern corner of the site that several windows open onto that does not conform to *Planning Code* Section 140 (Zoning Administrator), and a Variance for exceeding (during cumulative conditions) the wind hazard criterion established by *Planning Code* Section 148 (Zoning Administrator). The project sponsor would also seek transfer of development rights under Section 128 of the *Planning Code*, Transfer of Development Rights in C-3 Districts, for building above the permitted FAR in C-3-G Use districts (Planning Commission). The proposed project would also require approval by the Department of Building Inspection (DBI) for demolition, and building permits and temporary construction easements from the Department of Public Works (DPW) for construction along the street and sidewalk.

C. MAIN ENVIRONMENTAL EFFECTS

This EIR for the project focuses on the issues of cumulative land use impacts, cumulative aesthetic impacts, transportation, traffic noise, greenhouse gas emissions, wind, and shadow. Project-specific land use and aesthetics impacts are discussed only for informational purposes because the Initial Study found that the project-specific land use and aesthetics effects of the proposed project would be less than significant. On the basis of the Initial Study published on December 29, 2007, the San Francisco Planning Department determined that all other potential environmental effects would either be less than significant or reduced to a less-than-significant level with mitigation measures that the project sponsor would implement. (Please see the Initial Study, included in this document as Appendix A, for analysis of other environmental issues.) A section on other CEQA issues and areas of controversy is also included in this EIR in Chapter V.

LAND USE (page 53)

The project site is located within the Mid-Market area of the South of Market neighborhood of San Francisco. The project site is currently developed with an existing one-story commercial building and paved parking area. Adjacent to the project site, to the west, is 1449-1453 Mission Street, of which the

western portion is occupied by a five-story office building and the eastern portion (adjacent to the project site) is occupied by a fenced, paved surface parking area. Adjacent to the project site, to the south, is a three-story residential hotel building with a social service use on the ground floor and residential uses above (122 Tenth Street). Tenth Street is located east of the project site, and Mission Street runs along the northern property line of the project site. Land uses in the project vicinity (within approximately two blocks of the project site) are mixed and include commercial, office, retail, restaurant, public storage, parking lots, and residential uses. Within the project vicinity are buildings of different type, size, and age. On the project block, heights vary from one to seven stories. Most buildings in the project vicinity are one to five stories, but heights range up to 30 stories. Buildings south of Mission Street in the area are a maximum of seven stories in height, while buildings north of Mission Street range up to 30 stories.

The project site is within a Heavy Commercial (C-M) Use district. Residential uses are conditionally permitted in C-M districts, while various commercial uses are principally permitted. The project would not comply with existing zoning, under which the building could contain a maximum of 57 dwelling units and up to 128,520 gross sq.ft. of floor area. The project height and bulk would conform to current zoning, which allows a maximum of 130 feet in height, as proposed with the project. As noted above, the project sponsor is seeking reclassification of the site to C-3-G (Downtown General Commercial), in which the proposed residential use would require a Conditional Use authorization, and in which the proposed retail use would be a principal permitted use.

The project is located adjacent to, but not within, two active planning areas—the Market-Octavia and Western SoMa planning areas. The recently adopted Market-Octavia Plan raised height limits on Van Ness Avenue at Mission Street to 120 and 250 feet. The Market-Octavia Plan lowered height limits along Mission Street east of Van Ness Avenue from 130 feet to 85 feet, extending to the western property line of the subject property. In the block east of the project site, heights along Mission Street range from 120 to 160 feet. Immediately south of the project site, heights are limited to 50 feet. A draft Western SoMa Plan is undergoing environmental review. The project as proposed would contrast with the recent height rezoning of the adjacent Market-Octavia Plan parcels to the west and height limits of parcels to the south. It would be consistent with height limits on Mission Street at Van Ness Avenue and immediately east of the project site. The project site is not included in either the Market-Octavia Plan or the Western SoMa Plan areas. The project would be consistent with the height limit on the site.

The proposed project would not conflict with any applicable land use plan or policy adopted for the purpose of mitigating an environmental impact. It would replace the one-story, 18-foot-high commercial building and paved surface parking lot with a 14-story, commercial/residential building containing 2,742 sq.ft. of commercial space on the ground floor, and 117 residential units on the upper floors, in addition

to a three-level subterranean garage with up to 46 independently-accessible, or 101 valet residential parking spaces, and 15 commercial parking spaces. One car share space would be required and would be provided either at an off-site location within 800 feet of the project site, or within the garage. The proposed project would not divide the physical arrangement of its block or surrounding area. The proposed new building would be constructed within the existing lot boundaries, would not interfere with or change the existing street plan, and would not impede the passage of persons or vehicles. The surrounding uses and activities would remain and would interrelate with each other as they currently do.

The project proposes residential over ground-floor retail uses, which would introduce new uses to the project site. The proposed project would not introduce new or incompatible land uses to the area, as residential and retail uses currently exist in the project vicinity. Although the proposed project would be taller and a more intense land use than the immediately adjacent land uses (particularly residential developments), the project would be consistent with the varied size, structures and mixed land use character of the area, as well as the existing and proposed taller and more intense uses on the north side of Mission Street in the project vicinity. The proposed uses would not substantially change or adversely affect the land use character of the project site or vicinity, and would not constitute a significant land use impact. The project site is in a developed urban area in transition, with non-residential land uses such as production, distribution, and repair (PDR) uses being replaced by high-rise, multi-family residential and mixed use buildings. A number of developments are under construction, have been approved, or are being reviewed within a two-block radius to the north and west along Market and Mission Streets.² With or without the proposed project, the character and intensity of the project vicinity would change due to development under construction, approved, and within the reasonably foreseeable future. As noted above, the site is outside the draft Western SoMa Plan area, which currently proposes policies for the preservation and retention of PDR uses (primarily south of Harrison Street), and outside the Eastern Neighborhoods Plan area, which contains policies for the preservation and replacement of PDR uses. While the proposed project, in combination with other projects, would contribute to these cumulative land use impacts, the contribution of the project would be cumulatively less than significant.

² It should be noted that in the South of Market area, streets that run in the northwest/southeast direction, such as 10th and 11th Streets are generally considered north-south streets, whereas streets that run in the southwest/northeast direction, such as Mission, Market, and Howard Streets are generally considered east-west streets.

CUMULATIVE AESTHETICS (page 62)

The Initial Study (pages 35 to 40 of Appendix A) found that the project would not have significant project-specific impacts related to visual quality and aesthetics, and determined that the EIR would analyze cumulative aesthetic impacts.

Scenic vistas and views are limited in the project vicinity due to the generally flat topography and the intervening buildings of surrounding urban development. The visual character of the project site and vicinity is urban with a variety of mixed uses. There are many buildings of different types, sizes, and ages. As noted above under the Land Use summary, building heights vary from one to seven stories on the project block. Most buildings in the project vicinity are one to five stories, but heights range up to 30 stories. Pedestrians and drivers see views of the project site from nearby portions of Mission and Tenth Streets. Intervening buildings screen views of the project site from more distant street-level vantage points.

The proposed project would not substantially alter or adversely affect existing scenic views or view corridors available to the public. The proposed building would be approximately 130 feet tall, 112 feet higher than the existing building, and would occupy the entire project site as opposed to the southern portion of the site, as the existing building does. The proposed project would be built within the existing lot and would not interfere with urban views along Mission and Tenth Streets. The proposed project would be among the taller structures in the neighborhood and would be visually prominent. The scale and massing of the proposed project would exceed that of most nearby buildings, and would be similar to the taller existing and approved buildings on the north side of Mission Street in the project vicinity. (See Figures 13 to 16, pages 66 to 69.) Due to intervening buildings and distance from the project site, the proposed project would have a less-than-significant effect on views from the nearest public open spaces: the Joseph L. Alioto Performing Arts Piazza (three blocks north of the project site), Howard and Langton Mini-Park (four blocks to east), Victoria Manalo Draves Park (five blocks east), and Hayes Green (five blocks northwest). Due to the distance between the project site and these open space areas, and the presence of intervening buildings, the upper floors of the proposed project may be visible from some locations in these parks, but the visible portion of the proposed project would constitute a small portion of the overall skyline. For this reason, the effects on views from these parks also would be less than significant.

The proposed in-fill development project would build out the site, but would not be inconsistent with the mixed visual character of surrounding development. The proposed project's specific building design and aesthetic would be considered during the City's design review and approval process.

The proposed project would have a less-than-significant aesthetic impact; it would not have a substantial demonstrable negative effect on a scenic vista, damage scenic resources, substantially degrade the site's or surrounding area's visual character, or create a new source of obtrusive light and glare. (Please also see Appendix A, Initial Study, page 36, for a more detailed discussion of this topic.)

TRANSPORTATION (page 75)

Based on the Planning Department's standard trip rates for residential, retail, and office space, the project would generate about 1,350 new daily person trips on a weekday, of which approximately 205 would occur during the weekday p.m. peak hour (5:00 to 6:00 p.m.). These 205 new person trips would include 27 trips by automobile, 70 trips by transit, 16 by car pool, and 92 trips by walking or other modes. Given applicable vehicle occupancy rates, these 43 trips by automobile (27 auto and 16 carpool trips) would translate to about 30 new vehicle trips during the p.m. peak hour.

The traffic analysis performed for the project examined existing and future operating conditions at nine study intersections: Market/Ninth, Market/Tenth, Market/Van Ness, Mission/Ninth, Mission/Tenth, Mission/Eleventh, Mission/South Van Ness, Howard/Ninth, and Howard/Tenth. Weekday traffic counts were made at these intersections in order to evaluate the existing traffic conditions during the weekday p.m. peak hour. The Planning Department considers intersection levels of service (LOS) ranging from LOS A to LOS D to be acceptable at signalized intersections, while LOS E and F are unacceptable (see Appendix B: Transportation Definitions). Any degradation to LOS E or F (including from LOS E to LOS F) is considered a significant impact on traffic circulation and operations. During the weekday p.m. peak hour, all of the study intersections that currently operate at LOS D or better would continue to operate at these acceptable levels, with the addition of project-generated traffic causing no substantial increase in delays. The intersection of Mission/South Van Ness would continue to operate at an unacceptable LOS E, but without a significant increase in delay from project-generated traffic. Because all study intersections except Mission/South Van Ness would continue to operate at the same acceptable service levels as under existing conditions (LOS D or better), and because the project traffic would not considerably contribute to the existing LOS E condition at the intersection of Mission/South Van Ness, the proposed project would not result in significant traffic impacts.

Traffic volumes and congestion are anticipated to increase over time in the project vicinity. Seven of the study intersections currently operating at LOS D or better are expected to continue operating at LOS D or better with no significant changes in delay at those intersections. The intersections of Mission/South Van Ness and Market/Van Ness would deteriorate from LOS E to LOS F and LOS C to LOS E, respectively. The project's share of future traffic growth at these intersections would be approximately 0.1 percent at

Market/Van Ness and approximately 0.4 percent at Mission/South Van Ness. For traffic movements that determine overall LOS performance at these intersections, the project would generally add traffic to movements that would continue to operate satisfactorily. The project would add some vehicles to one movement at each intersection that would operate poorly for 2020 cumulative conditions, but the project's contributions in each instance would be less than one percent. Therefore, project traffic would not represent a considerable contribution to 2020 cumulative traffic conditions and the project would not have a significant cumulative traffic impact.

The project site is well served by public transit. The project would generate about 70 new transit trips during the weekday p.m. peak hour. With the additional outbound and inbound transit trips, Muni and regional transit carriers would continue to operate within their respective capacity utilization and load factor standards. New transit trips generated by the project would not substantially affect transit service. Therefore, there would be no significant project impacts on transit operations.

The proposed project would generate a total of 139 pedestrian trips (69 walking or "other" trips to and from the site and 70 transit trips). Pedestrian conditions on the sidewalks and crosswalks in the area would not noticeably deteriorate with the addition of these walking trips. Both sidewalks and crosswalks would continue to operate at free-flow conditions.

The proposed project's new residential uses would generate a demand for about 150 parking spaces, while the building's management office and retail/business service use would generate a demand for eight parking spaces. This total parking demand of 158 spaces would exceed the capacity of the proposed 101-residential-space garage by 57 spaces. The shortfall could not be accommodated presently during the daytime in public parking facilities within the study area because they operate close to capacity (97 percent). Some of it may be accommodated overnight within the study area, either on street since parking meters are not time-limited typically between the hours of 6:00 p.m. to 9:00 a.m.; or in some of the off-street public parking facilities whose hours of operation meet the needs of parkers since the facilities now operate at about 35 percent occupancy in the evening with approximately 559 spaces available. Some of the demand shortfall could also be met in off-street public parking facilities outside the study area and further away from the project site. It is possible that the proposed project's actual demand for parking could be lower than estimated, or decrease over time, due to its close proximity to many public transit options (Bay Area Rapid Transit [BART]; Muni buses, streetcars, and light rail; SamTrans; and Golden Gate Transit), and the availability of car share programs, which may lead some residents to give up car ownership. The project would provide 42 bicycle parking spaces and one car share space (either at an off-street location within 800 feet of the project site, or within the parking garage), which would meet *Planning Code* requirements, and could reduce auto ownership and parking demand. Parking deficits are

considered to be social effects, rather than impacts on the physical environment as defined by CEQA. Under CEQA, a project's social impacts need not be treated as significant impacts on the environment. Environmental documents should, however, address the secondary physical impacts that could be triggered by a social impact. (CEQA Guidelines § 15131(a).) The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. In the experience of San Francisco transportation planners, however, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles or travel by foot) and a relatively dense pattern of urban development, induces many drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service, in particular, would be in keeping with the City's "Transit First" policy. The City's Transit First Policy, established in the City's Charter Section 16.102 provides that "parking policies for areas well served by public transit shall be designed to encourage travel by public transportation and alternative transportation." As such, the proposed project would not result in significant environmental parking impacts.

The project sponsor seeks reclassification of the project site from C-M to C-3-G. Under C-3-G zoning, the *Planning Code* does not require the proposed project to provide off-street parking spaces, and limits the maximum number of parking spaces that can be provided to 116: 101 residential spaces and 15 retail spaces. (Under the current C-M zoning, 117 parking spaces would be required. However, the proposed project would not be permitted under the C-M zoning.)

Since the proposed project would provide more than 100,000 gross sq.ft. of residential uses, the *Planning Code* would require one off-street loading space. The proposed project would provide one off-street loading space on Tenth Street that would provide approximately 12 feet of vertical clearance and would meet the design requirements of the *Planning Code*. The proposed project would generate a total of fewer than five daily truck trips, which equals a demand of less than one peak-hour loading space and less than one average-hour loading space. Residents moving in or out would be required to apply for a permit from the Police Department to reserve metered spaces along Tenth Street to accommodate trucks larger than the loading space, and such activity would be restricted to weekends only in order to avoid conflicts with vehicular and pedestrian traffic in the area.

During project construction, anticipated to last approximately 24 months, construction staging may occur on-site, and on adjacent sidewalks and streets. One lane along the length of the site on both Mission and Tenth Streets would be required during construction of the project. Barriers and bridges would be

constructed over the sidewalks, extending 102 feet along Tenth Street and 113 feet along Mission Street. Street space would be occupied on Tenth Street by a crane. Temporary sidewalk or travel lane closures would be coordinated with the City in order to minimize the impacts on local traffic. In general, lane and sidewalk closures are subject to review and approval by DPW and SFMTA.

Throughout the construction period, there would be a flow of construction-related trucks to and from the site. The impact of construction truck traffic would temporarily reduce the capacities of local streets due to the slower movement and larger turning radii of trucks, which may affect traffic operations.

During construction of the project, there would be between about 15-80 construction workers per day at the project site, with the greatest number (50-80) during the building framing and interior finish phases. The trip distribution and mode split of construction workers are not known. However, it is anticipated that the addition of the worker-related vehicle- or transit-trips would not substantially affect transportation conditions, because any impacts on local intersections or the transit network would be similar to, or less than, those associated with the proposed project, the impacts of which would not be significant. Construction workers who drive to the site would cause a temporary parking demand. Construction workers would either park on-street or in parking facilities inside or outside the study area. In summary, the proposed project would not result in significant adverse project or cumulative impacts on traffic, transit, parking, loading, pedestrian, or bicycle conditions.

NOISE (page 101)

The Initial Study found that the interior noise, building equipment noise, and construction noise impacts of the proposed project would be considered less than significant.

Based on published scientific acoustic studies, traffic volumes would need to approximately double to produce a noticeable increase in ambient noise levels in the area. The project-generated increase in vehicle trips would be less than a doubling of traffic volumes in the area; therefore, the project-specific traffic noise impact of the project would be less-than-significant.

At the most congested intersections in the project vicinity, Market/Van Ness and Mission/South Van Ness, the project's share of future traffic growth would be approximately 0.1 percent and 0.4 percent, respectively. The project's share of total volumes would be less than at 0.1 percent at both intersections. These project contributions to traffic would be much less than the approximate doubling needed to produce a noticeable increase in ambient noise levels in the area. Therefore, the contribution of traffic and traffic-generated noise associated with the proposed project would not be cumulatively considerable.

AIR QUALITY (page 105)

The Initial Study determined that, with implementation of a construction air quality mitigation measure (page 91 of the Initial Study, included here as Appendix A), project-generated air quality impacts would be mitigated to a less-than-significant level. Since publication of the Initial Study, the San Francisco Board of Supervisors has approved a series of amendments to the San Francisco Building and Health Codes referred to hereto as the Construction Dust Control Ordinance (176-08), effectively codifying the measures contained in the Construction Air Quality mitigation measure, and rendering the mitigation measure unnecessary.

The Ordinance requires that all site preparation work, demolition, or other construction activities for the proposed project comply with specified dust control measures. These measures may include watering all active construction areas. During excavation and dirt-moving activities, the construction contractor must wet sweep or vacuum the streets, sidewalks, paths and intersections where work is in progress at the end of the workday. Inactive stockpiles greater than a certain size must be covered, or other soil stabilization techniques employed.

These measures set forth by the San Francisco Building Code would ensure that potential dust-related air quality impacts would be reduced to a less-than-significant level.

WIND (page 110)

Wind tunnel tests for the project site and vicinity are presented for three scenarios: (1) existing conditions, (2) existing conditions plus the proposed project, and (3) cumulative development conditions (existing plus the proposed project plus other projects under construction or formal review). The tests measured wind speed at 27 locations at or near the project site.

The project site's wind conditions are moderate to windy. Existing wind conditions at one of the 27 test locations (No. 1 at the southwest corner of the intersection of Market and Tenth Streets) exceed the *Planning Code's* wind hazard criterion of 26 miles per hour (mph) averaged for a single full hour or more per year. This existing exceedance is estimated at 50 mph lasting 94 hours per year. Fifteen of the 27 test locations currently meet the *Planning Code's* pedestrian-comfort criterion of 11 mph exceeded less than 10 percent of the time year round. Wind speeds exceed the pedestrian comfort criterion at twelve locations. The highest wind speed—except for the hazard exceedance location—of 18 mph occurs at location 23 (northeast corner of the intersection of Mission and Eleventh Streets). The lowest wind speed is five mph at location 17 (north side of Mission Street between Ninth and Tenth Streets).

Compared to existing conditions, measured equivalent wind speeds with the proposed project would increase at ten locations, remain the same at six locations, and decrease at 11 locations. The proposed project would not have a significant wind impact because it would not cause winds to exceed the hazard criterion at a new location and it would not increase the wind speed or duration of an existing wind hazard exceedance. The proposed project would eliminate one existing pedestrian comfort criterion exceedance and add one new exceedance. These would not be significant impacts.

The wind tunnel tests indicated that cumulative development with the addition of the project would increase wind speed by one mph over the existing 50 mph wind at location 1 (the existing hazard criterion exceedance), and would add 15 hours per year to the existing exceedance's duration of 94 hours per year, for a total of 109 hours, compared to cumulative conditions without the project, which has a predicted duration of exceedance of 80 hours. Based on further analysis, the calculated hours of exceedance may be somewhat unreliable in extremely windy areas due to the technological limitations of the wind tunnel methodology. The consistent result of other wind studies in the project area is that cumulative development would generally result in a small improvement of the wind hazard situation at the intersection of Market and Tenth Streets. These previous studies have shown that the strong winds in the Tenth and Market area are attributable to the effects of the Fox Plaza structure, which accelerates and channels winds along Market and Tenth Streets. The proposed project is downwind of the intersection of Market and Tenth Streets, and wind impacts propagate downwind from a building. Given this, its distance from Tenth and Market Streets, the limits of the analysis, and the results of other studies in the area, the proposed project would not be expected to noticeably influence winds. For these reasons, the wind experts concluded that the statistical evidence does not support a considerable contribution or a significant cumulative wind impact due to the project.

SHADOW (page 122)

The proposed 130-foot-tall project is subject to Section 295 of the *Planning Code*, which specifies approval procedures for buildings above 40 feet in height that would cast new shadow on a property under the control of the Recreation and Park Commission. The Initial Study found that a previously proposed 16-story version of the proposed building does not have the potential to cast new shadow on public open space under the jurisdiction of the Recreation and Park Department, but that public open space not under Recreation and Park Department jurisdiction could be affected by the proposed project. Shadow studies detailing the extent of the project shadows on nearby streets and buildings in the months of December, March, June, and September on the 21st day of the month evaluated net new shadows that would be generated by the project with shadows cast by existing buildings in the project vicinity.

The proposed project would cast shadows on nearby streets, buildings, and parking lots at various times of the year, including partial shading, during portions of the morning, of the sites of the proposed 137-unit affordable housing project at the northwest corner of Mission and Tenth Streets and the approved 720-unit 1401 Market Street project at the southwest corner of Market and Tenth Streets. No public open space, including space not under Recreation and Park Department jurisdiction, would be affected by the proposed project.

Project shadows would affect portions of the proposed or approved residential buildings during portions of the morning, and project-generated shadows would not be substantial relative to shadows currently generated by existing buildings in the project vicinity. Although the new building would shade adjacent properties, it would not increase the total amount of shading in the neighborhood above levels that are common and generally accepted in urban areas. Given the dense urban setting of the proposed project, the conformity to the City's General Plan policies regarding shadows and *Planning Code* Section 295, and the limited extent of net new shadow on streets, sidewalks, and buildings, the shading which would result from the proposed project does not rise to the level of a significant environmental impact. The project would not make a substantial contribution to cumulative shadow impacts.

D. MITIGATION AND IMPROVEMENT MEASURES (page 131)

This Draft EIR includes mitigation measures that would avoid potentially significant impacts and improvement measures proposed to reduce less-than-significant project effects. Measures from the Initial Study (see Appendix A) are indicated with an asterisk (*). The project sponsor has agreed to implement all mitigation and improvement measures identified in this EIR.

MITIGATION MEASURE 1

Archeology (Testing) *

Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the Environmental Review Officer

(ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less-than-significant level of potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5(a)(c).

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that could potentially be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

- A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program (AMP). If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soil-disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with the project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should

be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program.* Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report.* Description of proposed report format and distribution of results.
- *Curation.* Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Section 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Section 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

MITIGATION MEASURE 2

Hazards (Underground Storage Tanks) *

The project sponsor has conducted a geophysical survey of the project site, which detected an underground object that could potentially be an underground storage tank (UST). During excavation and prior to construction, an additional geophysical investigation of surrounding sidewalk areas shall be conducted, under the direction of the San Francisco Department of Public Health (DPH). If it is determined during the additional geophysical investigation of surrounding sidewalk areas, or during construction, that a UST is in fact present, construction work shall be stopped and permits from the City Hazardous Material Unified Program Agency (HMUPA), Fire Department, and, if required, DPW (Streets and Sidewalk) shall be obtained for the UST (and related piping) removal. HMUPA, SFFD (and possibly DPW) will make inspections prior to removal, and only upon approval of the inspector may the UST be removed from the ground. Appropriate soil and, if necessary, groundwater samples shall be taken at the direction of the HMUPA inspector and analyzed. Appropriate transportation and disposal of the UST shall be arranged. If analytical results indicate non-detectable or low levels of contamination, HMUPA will issue a "Certificate of Completion." If the HMUPA inspector requires that an Unauthorized Release (leak) Report is required due to holes in the UST or odor or visual contamination, or if analytical results indicate there are elevated levels of contamination, the case will be referred to the Local Oversight Program for further action.

Hazards (Disposal of Contaminated Soil, Site Health and Safety Plan) *

If, based on the results of the soil tests conducted, the DPH determines that the soils on the project site are contaminated with contaminants at or above potentially hazardous levels, all contaminated soils designated as hazardous waste shall be excavated by a qualified Removal Contractor and disposed of at a regulated Class I, II, or III hazardous waste landfill in accordance with state and federal regulations, as

stipulated in the Site Mitigation Plan. The Removal Contractor shall, as required, obtain, complete, and sign hazardous waste manifests to accompany the soils to the disposal site. Other excavated soils shall be disposed of in an appropriate landfill, as governed by applicable laws and regulations, or other appropriate actions shall be taken in coordination with the DPH.

If the DPH determines that the soils on the project site are contaminated with contaminants at or above potentially hazardous levels, a Site Health and Safety (H&S) Plan would be required by the California Division of OSHA prior to initiating any earth-moving activities at the site. The Site Health and Safety Plan shall identify protocols for managing soils during construction to minimize worker and public exposure to contaminated soils. The protocols shall include at a minimum:

- Sweeping of adjacent public streets daily (with water sweepers) if any visible soil material is carried onto the streets.
- Characterization of excavated native soils proposed for use on site prior to placement to confirm that the soil meets appropriate standards.
- The dust controls specified in the San Francisco Construction Dust Control Ordinance.
- Protocols for managing stockpiled and excavated soils.

The Site Health and Safety Plan shall identify site access controls to be implemented from the time of ground disturbance through the completion of earthwork construction. The protocols shall include at a minimum:

- Appropriate site security to prevent unauthorized pedestrian/vehicular entry, such as fencing or other barrier of sufficient height and structural integrity to prevent entry and based upon the degree of control required.
- Posting of "no trespassing" signs.
- Providing on-site meetings with construction workers to inform them about security measures and reporting/contingency procedures.

If groundwater contamination is identified, the Site Health and Safety Plan shall identify protocols for managing groundwater during construction to minimize worker and public exposure to contaminated groundwater. The protocols shall include procedures to prevent unacceptable migration of contamination from defined plumes during dewatering.

The Site Health and Safety Plan shall include a requirement that construction personnel be trained to recognize potential hazards associated with underground features that could contain hazardous

substances, previously unidentified contamination, or buried hazardous debris. Excavation personnel shall also be required to wash hands and face before eating, smoking, and drinking.

The Site Health and Safety Plan shall include procedures for implementing a contingency plan, including appropriate notification and control procedures, in the event unanticipated subsurface hazards are discovered during construction. Control procedures could include, but would not be limited to, investigation and removal of hazards.

Hazardous Building Materials (PCBs, Mercury, Lead and others) *

The project sponsor shall ensure that pre-construction building surveys for PCB- and mercury-containing equipment, hydraulic oils, fluorescent lights, lead, mercury and other potentially toxic building materials are performed prior to the start of demolition. Any hazardous building materials so discovered shall be abated according to federal, state, and local laws and regulations.

Hazardous Building Materials (Removal of Hydraulic Hoists)

Prior to removal of the hydraulic hoists on the site, the project sponsor shall apply for permits from the Hazardous Materials Unified Program Agency (HMUPA) and the San Francisco Fire Department. The project sponsor shall comply with all conditions of the permits issued by the HMUPA and Fire Department for the proposed project.

B. IMPROVEMENT MEASURES

Improvement measures diminish project effects that the environmental analysis found to be less than significant. These measures are listed below.

IMPROVEMENT MEASURE 1

Transportation (Loading)

Occasionally a large semi tractor-trailer may be used during move-in or move-out of the residential units. These vehicles could not be accommodated in the proposed on-site loading space and would have to use Tenth Street. This activity would be restricted to weekends only in order to avoid conflicts with vehicular and pedestrian traffic in the area.

Transportation (Construction)

Any construction traffic occurring between 7:00 a.m. and 9:00 a.m. or between 3:30 p.m. and 6:00 p.m. would coincide with peak hour traffic and could impede traffic flow. The impact of lane closures and construction traffic would decrease the capacity of streets and slow the movement of traffic (including Muni and other buses). During the a.m. peak period on one-way, southbound Tenth Street, and during off-peak period, traffic volumes may accommodate construction vehicles without substantial delay to traffic. To the extent possible, the proposed project would limit truck movements to the hours before 3:30 p.m. Prior to any lane closure and encroachment on traffic lanes, proper permits must be obtained from the City. The project sponsor and construction contractor(s) would meet with the SFMTA, the Fire Department, and the Planning Department to determine feasible traffic mitigation measures to reduce traffic congestion and pedestrian circulation impacts during construction of the project. In addition, to ensure that construction activities do not impact Muni bus stops or routes in the area, the project sponsor would coordinate with Muni's Chief Inspector prior to construction.

E. OTHER CEQA ISSUES (page 139)

GROWTH INDUCEMENT (page 139)

The proposed project's 117 residential units and 2,742 sq.ft. of retail/personal services space would increase the daily population on the vacant project site by approximately 222 residents and 11 net new employees (13 total employees). The induced growth of the proposed project in San Francisco and the region would not exceed the growth anticipated in the Association of Bay Area Government's (ABAG's) regional forecasts of employment and population growth. The proposed project would occur in an already urbanized area in San Francisco; it would not result in the extension of utilities or roads into undeveloped areas, and would not directly lead to substantial development outside the City. For these reasons, the proposed project would not cause significant growth-inducing impacts.

GREENHOUSE GAS EMISSIONS (page 139)

The Initial Study determined that the EIR would contain a quantitative assessment of the proposed project's contribution to cumulative greenhouse gas (GHG) emissions. Direct project emission of carbon dioxide equivalents (CO₂-eq) (including CO₂, NO_x, and CH₄ emissions) would include 286 tons of CO₂-eq/ year from transportation and 345 tons of CO₂-eq/year from heating, for a total of 631 tons of CO₂-eq/year of directly emitted GHGs, or 0.001 percent of Bay Area direct GHG emissions. The project would

also indirectly result in GHG emissions from off-site electricity generation at power plants (approximately 226 tons of CO₂-eq/year) and from anaerobic decomposition of solid waste disposed of at landfills, mostly in the form of methane (approximately 125 tons of CO₂-eq/ year), for a GHG emissions total of approximately 981 tons of CO₂-eq/year. This is equivalent to approximately 0.0011 percent of total Bay Area GHGs emitted in 2002.

Given that: (1) the proposed project would not emit a substantial amount of greenhouse gases; (2) the proposed project would not contribute significantly to global climate change such that it would impede the State's ability to meet its greenhouse gas reduction targets under AB 32; and (3) past, current and probable future state and local greenhouse gas reduction measures have reduced and will continue to reduce a project's contribution to climate change, the proposed project would not contribute significantly, either individually or cumulatively, to global climate change. Accordingly, the proposed project would not be considered to have a significant impact on the cumulative air quality of the Bay Area.

SIGNIFICANT UNAVOIDABLE EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED (page 151)

No significant project-specific or cumulative impacts that could not be eliminated or reduced to an insignificant level by mitigation measures have been identified.

With implementation of the mitigation measures outlined in Chapter IV, Mitigation and Improvement Measures, of this report, all potential significant impacts would be reduced to a less-than-significant level. With implementation of the improvement measures identified herein, less-than-significant impacts would be further reduced.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED (page 152)

On May 19, 2006, the Planning Department issued a "Notification of Project Receiving Environmental Review," and on December 29, 2007, it issued a "Notice of Preparation of an Environmental Impact Report" For the 1415 Mission Street property. Recipients of these notices included owners of properties within 300 feet of the project site, tenants of properties adjacent to the site, and other potentially interested parties including neighborhood groups and various state and regional agencies. Concerns and issues raised by the public regarding the environmental review were addressed in the Initial Study and/or were included in this EIR where appropriate, as indicated below (in parentheses).

Commenters raised the following concerns:

- Concern about the height, context and scale of proposed project, neighborhood character, and residential density (see Land Use and Zoning, page 53, Aesthetics, page 62, and Initial Study, page 30)
- Concern about blockage of views (see Aesthetics, page 62, and Initial Study, page 37)
- Concern about transit, traffic, and bicycle facilities (see Transportation, page 75)
- Concern about construction noise (see Initial Study, page 48)
- Concern about wind (see Wind, page 110)
- Concern about blockage of air and light (see Shadow, page 122)
- Concern about effect on parks and open space (see Initial Study, page 58)

Following publication of the Draft EIR, there will be a period of formal public comment on the adequacy and accuracy of the Draft EIR, with a public hearing before the Planning Commission. Public comments regarding the environmental review of the proposed project are encouraged during the comment period and should be mailed to the San Francisco Planning Department, attention: Bill Wycko, Environmental Review Officer, 1415 Mission Street Mixed Use Development Project, 1650 Mission Street, Suite 400, San Francisco, California 94103. Following the comment period, a Comments and Responses document will be prepared that includes all comments submitted at the hearing or in writing during this period, contains written responses to the comments, and specifies any changes to the DEIR. This document, together with the DEIR, will constitute the Final EIR (FEIR). The Planning Commission will decide on the adequacy and accuracy of the environmental analysis in the EIR certification hearing.

F. ALTERNATIVES TO THE PROPOSED PROJECT (page 153)

ALTERNATIVE A: NO PROJECT

Alternative A, the No Project Alternative, would entail no changes to the project site. The existing one-story, 18-foot-tall, approximately 5,000-sq.ft. commercial building and paved surface parking lot on the property would remain. The proposed 14-story, approximately 130-foot-tall mixed use building with about 2,742 sq.ft. of ground-floor commercial space, 117 residential units on the upper floors, and a three-level subterranean garage, with up to 46 independently accessible, or 101 valet, residential parking spaces plus 15 commercial parking spaces, would not be constructed. This alternative would not preclude future proposals for redevelopment of the project site.

The environmental characteristics of this alternative would generally be as described in the existing Setting sections of Chapter III. This alternative would not have any significant effects. Impacts related to

land use, aesthetics, population and housing, transportation, noise, air quality, greenhouse gas emissions, shadow, wind, hazardous materials, cultural resources, recreation, utilities and service systems, public services, geology and soils, and hydrology and water quality would be notably less than with the project.

Less-than-significant effects described in the Initial Study (see Appendix A) would not occur with this alternative, including those in the areas of project-specific land use, project-specific aesthetics, population and housing, cultural resources (historic architectural), recreation, utilities and service systems, public services, biological resources, geology and soils, hydrology and water quality, hazardous materials, mineral and energy resources, and agriculture resources.

The No Project Alternative would not meet the objectives of the project sponsor, R & K Investments, to (1) construct a high-quality, cost-effective mixed-use commercial-residential building with up to 117 residential units in a South of Market location that is well-served by local and regional transit; (2) design a project that is intended to enhance the existing urban character of the area and anchors the prominent corner site with a building up to 130 feet tall; (3) convert the site into a dense residential development that will contribute to the City's supply of housing, including a substantial number of units of appropriate size for families; (4) improve neighborhood amenity through the provision of pedestrian-oriented commercial space; (5) efficiently provide on-site parking and loading to meet the needs of the project; (6) develop a project with minimal environmental disruption; (7) construct a high-quality residential development that produces a reasonable return on investment for the project sponsor; or (8) complete the project on schedule and within budget.

If the Planning Commission selected this alternative, a different development proposal might be submitted at a later date; that proposal would be subject to CEQA requirements.

ALTERNATIVE B: EXISTING ZONING ALTERNATIVE

Alternative B, the Existing Zoning Alternative, would comply with existing zoning controls, and, unlike the proposed project, would not require a Zoning Map Amendment to reclassify the project site from C-M to C-3-G, Conditional Use authorization for dwelling-unit density, a Variance for dwelling unit exposure or exceedance of the wind hazard criterion, or exceptions to the rear yard and off-street parking requirements. Under existing zoning, the building could be a maximum of 130 feet in height, with a maximum of 57 dwelling units and 102,816 gross sq.ft. of floor area. However, with only 57 residential units compared to the proposed project's 117 units, the Existing Zoning Alternative would not be built to the maximum building envelope permitted on the site. This alternative would demolish the existing building and remove the surface parking lot (as the proposed project would), and construct a mixed-use

building of approximately 8 stories and 75 feet in height. Total building area would be approximately 101,750 sq.ft., or approximately 40 percent less than the approximate 168,194-sq.ft. proposed project. This building would have 2,742 sq.ft. of commercial space on the ground floor and a total of 57 residential units on the upper floors, compared to 2,742 sq.ft. of commercial space and 117 residential units under the proposed project. A subterranean parking garage would have two levels and 57 independently accessible residential spaces. No commercial parking would be required under the Existing Zoning Alternative.

Compared to the proposed project, the Existing Zoning Alternative would have the following impacts:

- The approximately 51 percent reduction in residential units under this alternative would generate a corresponding reduction in vehicle trips. The Existing Zoning Alternative would result in smaller increases in delays at nearby intersections, although the impact on these intersections would be less than significant for both the proposed project and this alternative. Similarly, this alternative would make a smaller contribution to cumulative traffic, the contribution to cumulative traffic impacts of both the proposed project and this alternative would be less than significant. Under cumulative conditions, the level of service at the Mission/South Van Ness and Market/Van Ness intersections would deteriorate to unacceptable levels due to cumulative development without implementation of either this alternative or the proposed project.
- The reduction in trip generation with this alternative would be expected to generate less air pollution, fewer greenhouse gas emissions, and a smaller contribution to cumulative traffic noise impacts than the project.
- This alternative's lower building height (75 feet compared to 130 feet) would result in even less than the proposed project's less-than-significant shadow, aesthetic, and wind impacts.
- This alternative would have the same land uses as the proposed project, but with about one-third of the density of the project and less intensive land use impacts. It would not physically divide an established community, conflict with adopted land use plans, or substantially or adversely alter the vicinity's land use character.
- The alternative's eight-story building would increase development height on the project site similar to the proposed project. It would have less than the project's less-than-significant visual character impact as the proposed project on the project site and its surroundings, because it would be approximately 55 feet shorter. Like the proposed project, this alternative would not block scenic public views or vistas.
- The Existing Zoning Alternative's archeology, construction noise, construction air quality, and hazardous materials impacts would be the same or less than those of the proposed project and would require implementation of the mitigation measures identified in Chapter IV, Mitigation and Improvement Measures, page 131.

This alternative would have impacts similar to or reduced from the proposed project's less-than-significant impacts identified by the Initial Study in the areas of population and housing, historical

architectural resources, air quality (other than construction emissions), recreation, utilities and service systems, public services, biological resources, geology and soils, hydrology and water quality, mineral and energy resources, and agricultural resources.

This alternative, unlike the project, would not require a Zoning Map Amendment to reclassify the project site from C-M to C-3-G, Conditional Use authorization for dwelling-unit density, a Variance for dwelling unit exposure or wind hazard criterion exceedance, or exceptions to the rear yard and off-street parking requirements. A Conditional Use authorization would be required for residential use in a C-M Use district.

The Existing Zoning Alternative would partially meet the project sponsor's objectives to construct a high-quality mixed use commercial-residential building in the South of Market neighborhood. This alternative would meet other objectives of the project sponsor to design a project that is intended to enhance the existing urban character of the area and has minimal environmental disruption. However, this alternative would not meet the project sponsor's objective of a reasonable return on investment or the goal of anchoring the corner site with a visually prominent building.

ALTERNATIVE C: REDUCED SCALE ALTERNATIVE

Alternative C, the Reduced Scale Alternative, would demolish the existing building and remove the surface parking lot (as the proposed project would), and construct a smaller mixed use building of eight stories and approximately 75 feet in height. This building would have 2,742 sq.ft. of commercial space on the ground floor, and 78 residential units on the upper floors. Total building area would be approximately 101,750 sq.ft., or approximately 40 percent less than the approximate 168,194-sq.ft. proposed project. A smaller subterranean parking garage would have approximately two levels, with up to 39 independently accessible or 68 valet parking spaces, compared to three levels with the proposed project. Specifically, compared to the proposed project, the Reduced Scale Alternative would have the following impacts:

- Since the proposed project's residential land use would be reduced by approximately 40 percent under this alternative, total trip generation would be reduced proportionately. The Reduced Scale Alternative would result in smaller increases in delays at nearby intersections, although the impact on these intersections would be less than significant for both the proposed project and this alternative. Similarly, this alternative would make a smaller contribution to cumulative traffic; the contribution to cumulative traffic impacts of both the proposed project and this alternative would be less than significant. Under cumulative conditions, the level of service at the Mission/South Van Ness and Market/Van Ness intersections would deteriorate to unacceptable levels without implementation of either this alternative or the proposed project.

- The reduction in trip generation would be expected to generate less air pollution, fewer greenhouse gas emissions, and a smaller contribution to cumulative traffic noise impacts.
- This alternative's lower building height (75 feet compared to 130 feet) would result in even less than the proposed project's less-than-significant shadow, aesthetic, and wind impacts.
- Since this alternative has the same land uses as the proposed project, it would have similar but somewhat less intensive less-than-significant land use impacts. It would not physically divide an established community, conflict with adopted land use plans, or substantially or adversely alter the vicinity's land use character.
- The alternative's eight-story building would increase development density and height on the project site less than the 14-story proposed project and would have less than the project's less-than-significant visual character impact as the proposed project on the project site and its surroundings, because it would be approximately 55 feet shorter. Like the proposed project, this alternative would not block scenic public views or vistas.
- The Reduced Scale Alternative's archeology, construction noise, construction air quality, and hazardous materials impacts would be the same or less than those of the proposed project and would require implementation of the mitigation measures identified in Chapter IV, Mitigation and Improvement Measures, page 131.

This alternative would have impacts similar to or less than the proposed project's less-than-significant impacts identified by the Initial Study in the areas of population and housing, historical architectural resources, air quality, recreation, utilities and service systems, public services, biological resources, geology and soils, and hydrology and water quality. Like the proposed project, this alternative would have no impact on mineral and energy resources, and agricultural resources.

The Reduced Scale Alternative would partially meet the project sponsor's objectives to construct a high-quality mixed use commercial-residential building in the South of Market neighborhood. This alternative would meet the other objectives of the project sponsor to design a project that is intended to enhance the existing urban character of the area and has minimal environmental disruption. However, this alternative would not meet the project sponsor's objective of a reasonable return on investment or the goal of anchoring the corner site with a visually prominent building.

ALTERNATIVES CONSIDERED AND REJECTED

The proposed project consists of demolition of the existing one-story, 18-foot commercial building and surface parking lot on the site and construction of a 14-story, 130-foot-tall mixed use building. Whether property is owned or can reasonably be acquired by the project sponsor has a strong bearing on the feasibility of developing a project alternative at a different site. The project sponsor does not own any alternative sites in San Francisco. No viable alternative sites have been identified within San Francisco where the proposed project could be constructed that would meet most of the project sponsor's objectives

and where the project's environmental impacts would be substantially lessened or avoided. Furthermore, even if a potential alternative site were available, it is likely that the environmental effects of a similar project at an alternative site would be generally comparable to the impacts of the proposed project at the proposed site. Therefore, an off-site alternative was considered and rejected.

Because the proposed project would not have any significant project-specific or cumulative impacts, an alternative is not needed to reduce such impacts to a less-than-significant level. Therefore, a Mitigating Alternative is not included.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As discussed above, the project would not cause a project-specific or cumulative significant impact. Alternative B, the Existing Zoning Alternative, would be the environmentally superior alternative, because it would have even less physical impacts than the proposed project.

PAGE INTENTIONALLY LET BLANK

II. PROJECT DESCRIPTION

The project sponsor filed an application on June 8, 2005, for the environmental evaluation of the proposed 1415 Mission Street Mixed Use Development Project. Subsequently, the project sponsor filed a new application on February 13, 2007 for a revised project, which is the current proposed project. Based on the Initial Study published on December 29, 2007, the San Francisco Planning Department determined that an EIR is required. The Initial Study found cumulative land use, aesthetic, and traffic noise impacts, as well as project-specific transportation, traffic noise, wind, and shadow impacts, as potentially significant environmental effects. Accordingly, these effects are analyzed in this EIR. The Initial Study concluded that many of the physical environmental effects of the proposed project would be less than significant or that mitigation measures, agreed to by the project sponsor, would reduce them to less-than-significant levels (see Chapter IV: Mitigation and Improvement Measures). CEQA does not require further assessment of these less-than-significant environmental effects, which, for the proposed project, include effects on project-specific land use and aesthetics, population and housing, cultural and paleontological resources, air quality, recreation, utilities and service systems, public services, biological resources, geology and soils, hydrology and water quality, hazards and hazardous materials, mineral and energy resources, and agricultural resources. While the Initial Study found that the proposed project would not cause potentially significant environmental effects for project-specific land use and aesthetics would not require further analysis of these topics, this EIR includes a discussion of project-specific land use and aesthetics issues for informational purposes.

A. PROJECT LOCATION

The project site is in San Francisco's South of Market neighborhood, on the southwest corner of Mission and Tenth Streets (see Figure 1, page 31). The project site is located at 1415 Mission Street on Assessor's Block 3510, Lot 001. The approximately square site is on the block bounded by Mission Street (north), Tenth Street (east), Howard Street (south), and Eleventh Street (west). This South of Market block is bisected twice, by Minna and Natoma Streets. The project site is within the Heavy Commercial (C-M) Use district and 130-L Height and Bulk district.

The approximately 11,424-sq.ft. project site is essentially level and contains a one-story, 18-foot-tall, approximately 5,000-sq.ft. commercial building, situated at the southern edge of the lot, and set back from Mission Street by a paved surface parking lot. The site was last occupied by a tire sales and repair business and is currently used as an attended indoor/outdoor parking facility. The former auto service bays of the existing building are currently used for vehicle parking and the accessory office portion of the building is used as the office of the parking facility.

B. PROJECT CHARACTERISTICS

The proposed project would demolish the existing one-story, 18-foot-tall automotive retail and service building and adjoining asphalt parking lot at the site. It would construct a 14-story, 130-foot-tall, approximately 168,194-sq.ft. mixed use building with 117 residential units, about 2,742 sq.ft. of ground-floor commercial space and a three-level below-grade parking garage for up to 46 independently-accessible, or 101 valet residential parking spaces and 15 commercial parking spaces. The proposed land uses and project characteristics are shown in Table 1, page 32. Figures 2 through 8 (pages 33 to 39) show the project site plan, representative floor plans, and elevations.

The proposed project's approximately 122,073 sq.ft. of residential space, located on the second through fourteenth floors, would be a mix of about 26 studio, 39 one-bedroom, and 52 two-bedroom units, ranging in size from approximately 450 to 1,200 sq.ft. Of the 117 units, 18 units, or approximately 15 percent, would be designated as on-site affordable housing units, as required under the City's Inclusionary Housing Ordinance (San Francisco *Planning Code*, Section 315).

The ground floor of the building would comprise a residential lobby facing Mission Street and 2,742 sq.ft. of commercial space at the corner of Mission and Tenth Streets. A fitness center, an approximately 100-sq.ft. building management office, and a secure 42-space bicycle storage area would be located inside the building on the ground floor. The bicycle storage area would be accessible via the residential lobby. Screened entrances to a street-level freight and service loading area and an underground parking garage would be located on the building's Tenth Street frontage. The proposed project would include street trees along both the Mission and Tenth Street frontages, as required by the City.

The three-level, 29,343-sq.ft., below-grade parking garage would include up to 15 commercial parking spaces and 46 independently accessible residential parking spaces, or 101 valet-operated parking spaces. The parking garage would include two handicapped parking spaces and one additional car share space



Source: During Associates

1/26/00

Proposed Project Location Figure 1

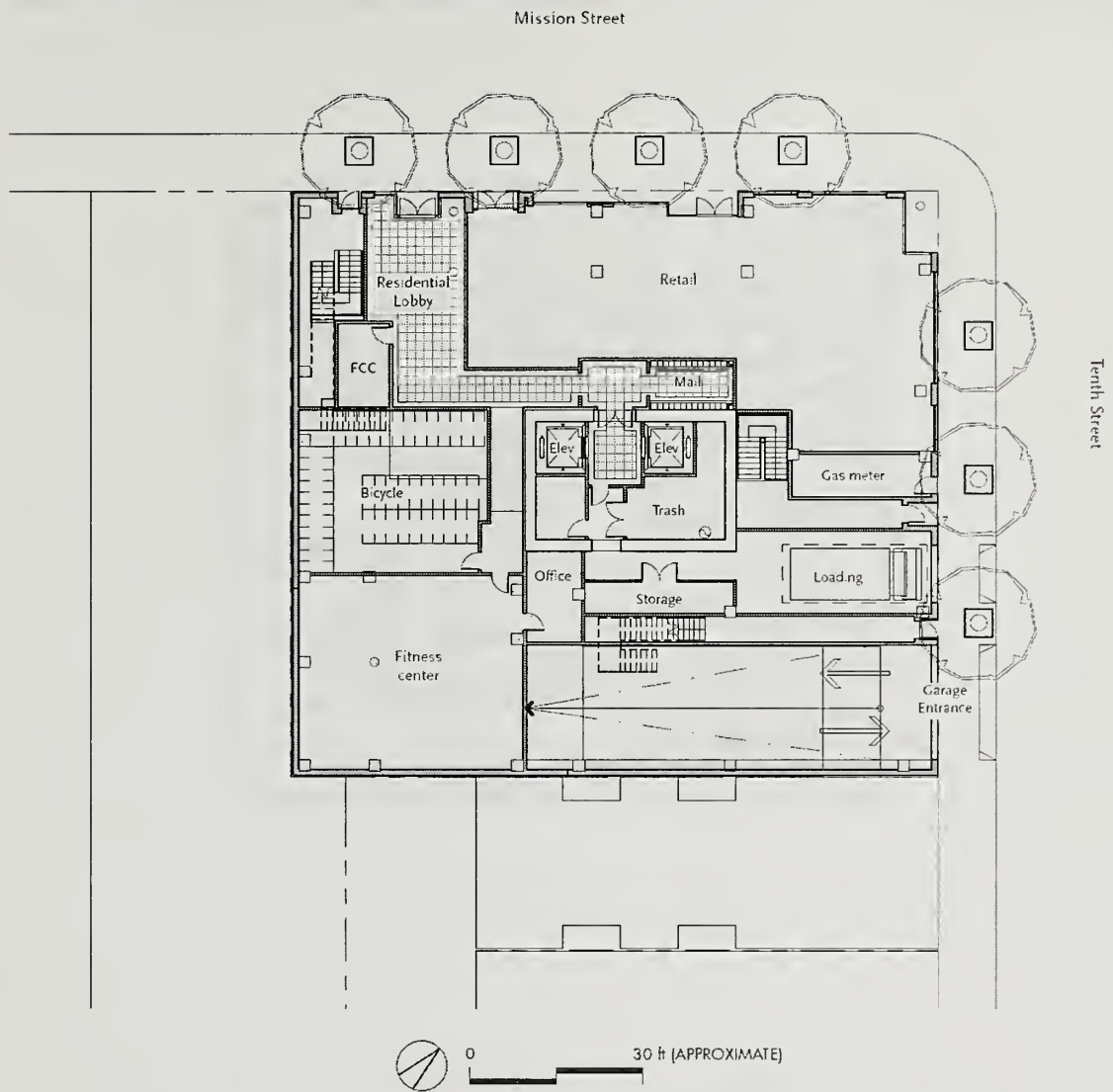
| Table 1 Project Characteristics | |
|--|-----------------------|
| Use/Characteristic | Area/Amount |
| Residential | 122,073 sq.ft. |
| Commercial | 2,742 sq.ft. |
| Residential common area | 5,139 sq.ft. |
| Amenities | 2,608 sq.ft. |
| Mechanical/Other | 6,289 sq.ft. |
| Building Subtotal | 138,851 sq.ft. |
| Parking | 29,343 sq.ft. |
| Total | 168,194 sq.ft. |
| Dwelling units | 117 |
| Residential parking spaces (independently accessible/valet) | 46/101 |
| Commercial parking spaces | 15 |
| Common Open Space | 2,453 sq.ft. |
| Private Open Space | 4,200 sq.ft. |
| Total Open Space | 6,653 sq.ft. |
| Height of building | 130 ft. |
| Number of stories | 14 |

Source: During Associates, 2008

would be provided at an off-site location within 800 feet of the project site.³ As described above, 42 bicycle spaces would be provided as required by the *Planning Code*. The proposed project would meet *Planning Code* requirements for bicycle storage and car share space by providing 42 bicycle spaces and one car-share space.

Approximately 2,453 sq.ft. of common usable open space would be provided at the penthouse (roof) level for the use of residents. Seventy-six of the 117 dwelling units would have access to private open space in the form of balconies or terraces ranging in size from 50 to 75 sq.ft. and totaling approximately 4,200 sq.ft. In addition to the residential, retail/personal services, ground-floor fitness center, parking, and open

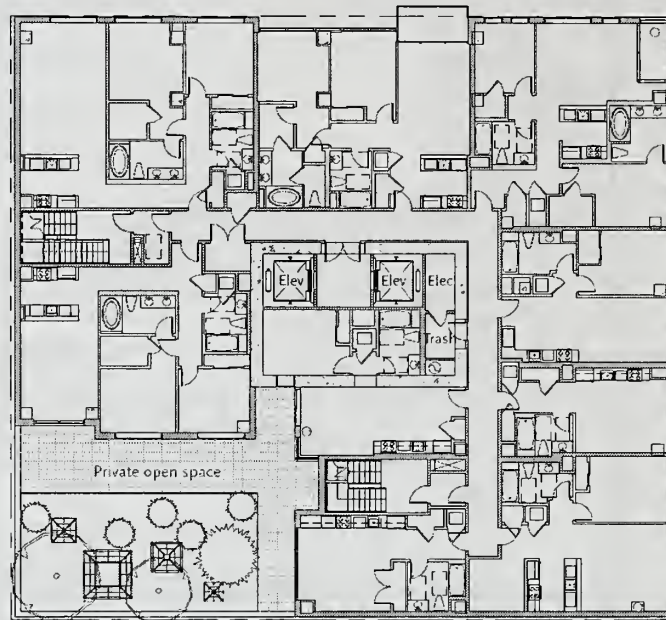
³ At the time of publication, no off-site location for the car share space had been identified within 800 feet. If none is identified and secured, the project sponsor would locate the car share space in the parking garage.



Source: Heller Manus Architects

9-20-10R

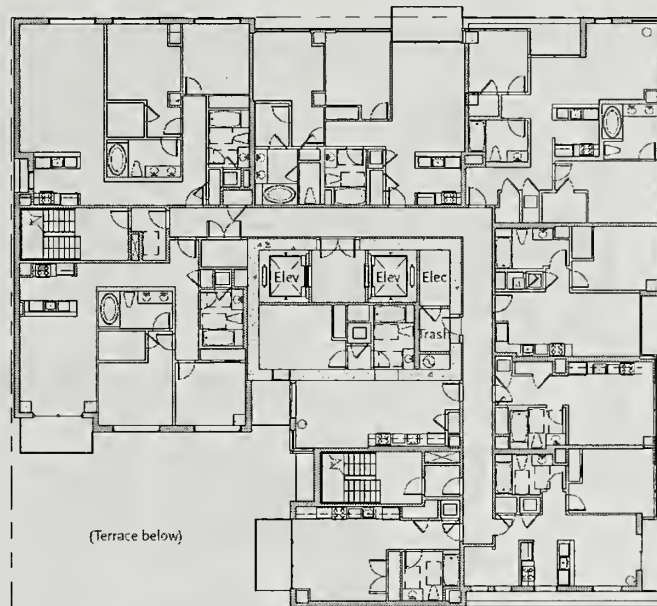
Proposed Ground Floor Plan Figure 2



Source: Heller Manus Architects

9-20-08

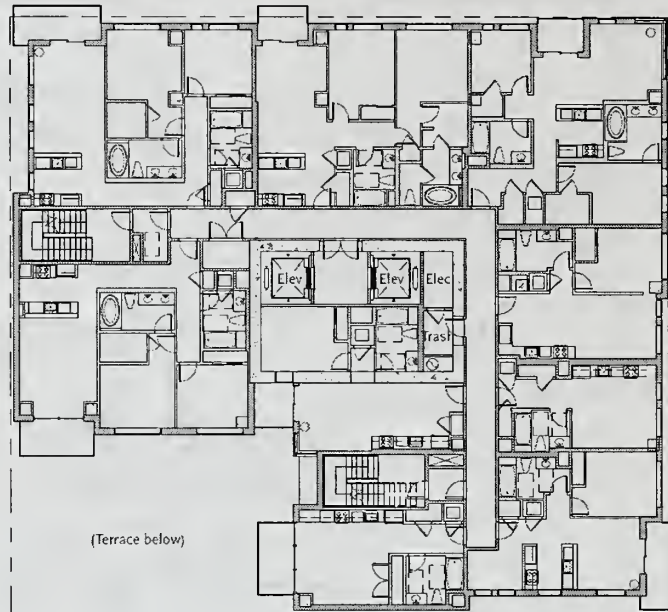
Proposed Second to Fourth Level Floor Plans Figure 3



Source: Heller Manus Architects

26.05

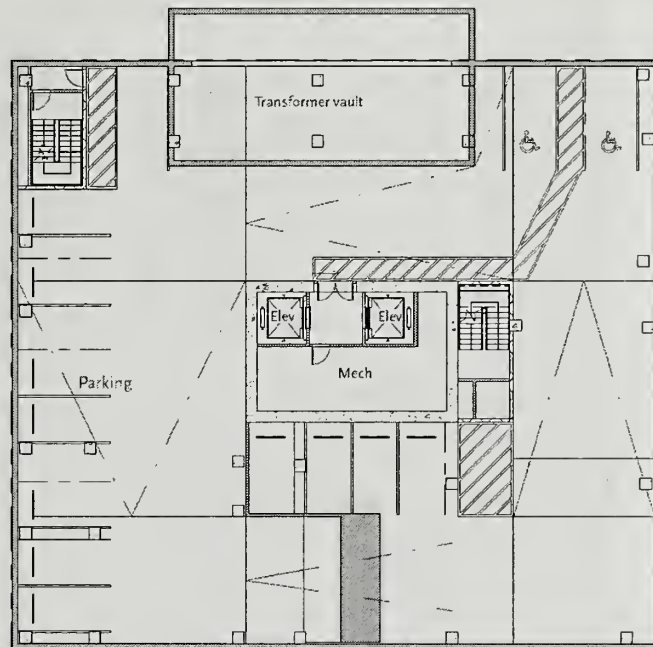
Proposed Fifth to Eighth Level Floor Plans Figure 4



Source: Heller Manus Architects

9-26-08

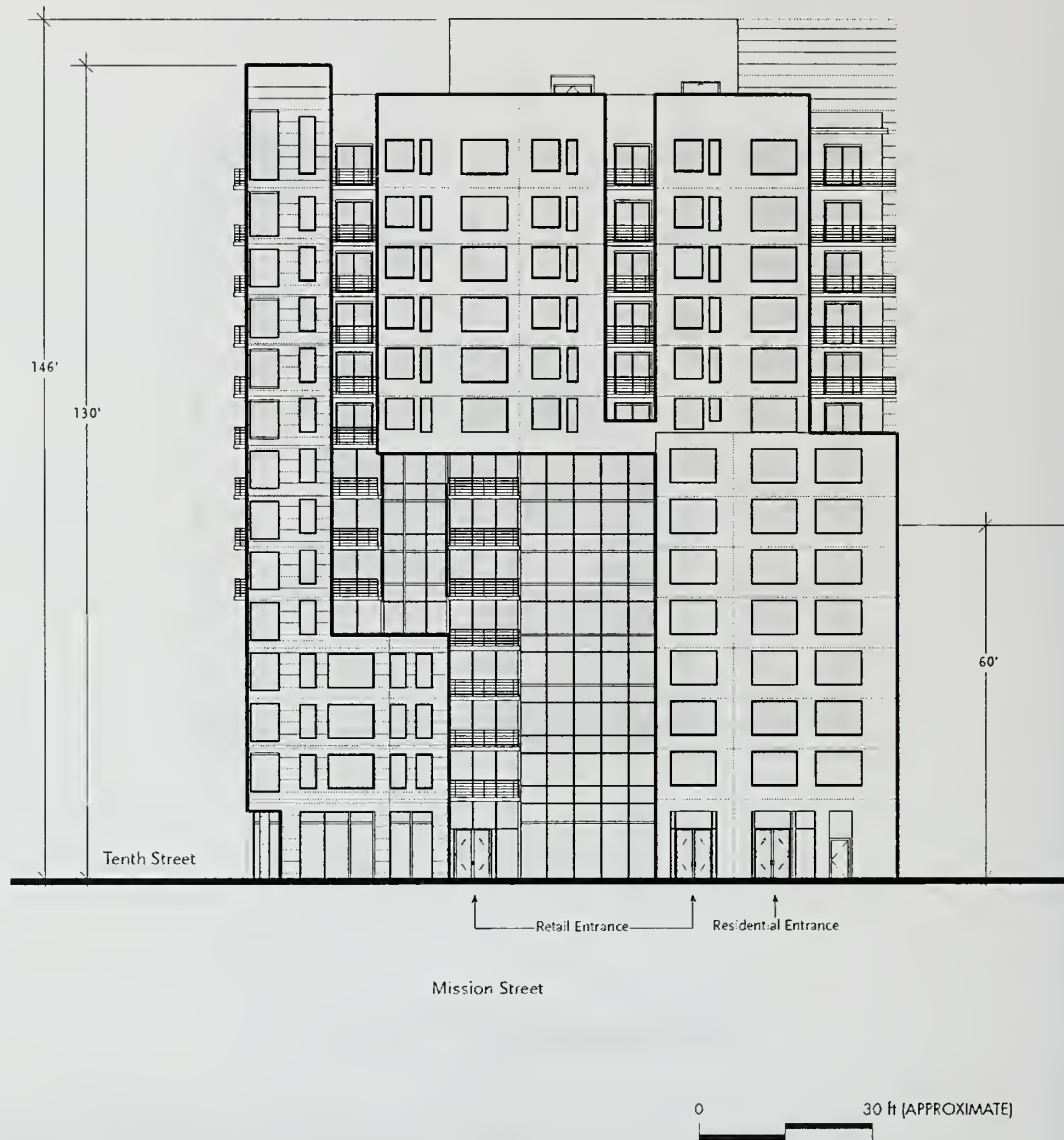
Proposed Ninth to Fourteenth Level Floor Plans Figure 5



Source: Heller Manus Architects

1-27-09

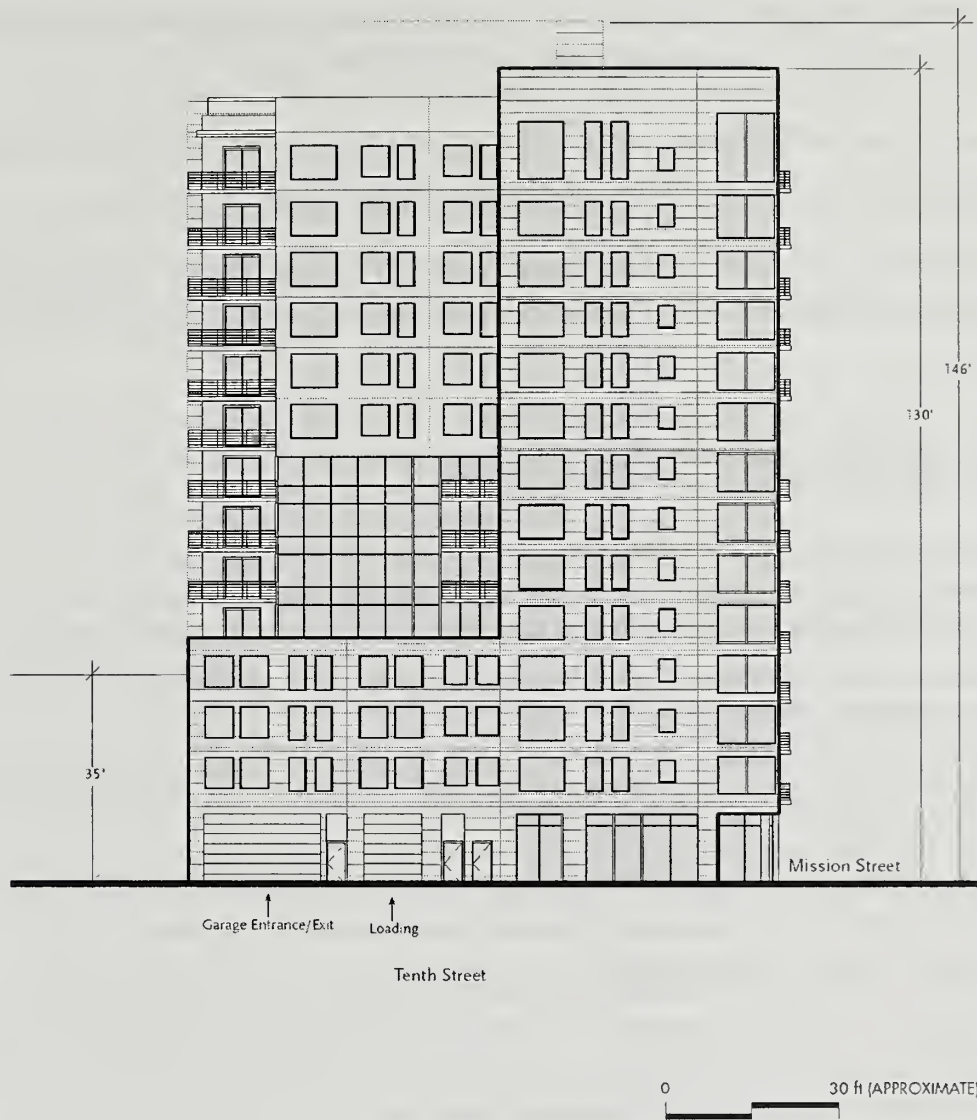
Proposed Basement Level B1 Parking Plan Figure 6



Source: Heller Manus Architects

1.20.09

Proposed Mission Street (North) Elevation Figure 7



Source: Heller Manus Architects

1.26.19

Proposed Tenth Street (East) Elevation Figure 8

space described above, there would be about 5,139 sq.ft. of residential common area (including lobby, stairways, bicycle parking, mail room, trash room, management office, utility room, loading area, and storage space) on the ground floor, and 6,289 sq.ft. of mechanical/other space.

The proposed project would require excavation to a depth of approximately 35 feet for the three-level parking garage and foundation, and removal of approximately 14,800 cubic yards of soil.

Project construction is estimated to take approximately 24 months with a construction cost of approximately \$34.7 million. The project sponsor is R & K Investments and the project architect is Heller Manus Architects.

C. PROJECT SPONSOR'S OBJECTIVES

The project sponsor has the following objectives:

- Construct a high-quality, cost-effective mixed use commercial-residential building with up to 117 residential units in a South of Market location that is well-served by local and regional transit.
- Design a project that enhances the existing urban character of the area and anchors the prominent corner site with a building up to 130 feet tall.
- Convert the underutilized, auto-oriented site into a dense residential development that will contribute to the City's supply of housing, including a substantial number of units of appropriate size for families.
- Improve neighborhood amenity through the provision of pedestrian-oriented commercial space.
- Efficiently provide on-site parking and loading to meet the needs of the project.
- Develop a project with minimal environmental disruption.
- Construct a high-quality residential development that produces a reasonable return on investment for the project sponsor.
- Complete the project on schedule and within budget.

D. PROJECT APPROVAL REQUIREMENTS

After the public comment period on this Draft EIR noted on the cover of this report, including a public hearing before the Planning Commission on the Draft EIR, responses to written and oral comments will be prepared and published in a Comments and Responses document. This Draft EIR, together with the Comments and Responses document, will be considered by the Planning Commission in a noticed public meeting, and then certified as a Final EIR if deemed adequate, accurate, and objective. No approvals or permits can be issued until the Planning Commission certifies the Final EIR.

In order to allow the proposed project, the project sponsor would seek the following zoning change:

- Zoning Map Amendment (under *Planning Code* Section 302), to reclassify the project site from its C-M Use district to a C-3-G (Downtown General Commercial) Use district. *Zoning Map Amendments require Planning Commission recommendation, Board of Supervisors approval, and signature by the Mayor.*

This EIR contains an Existing Zoning Alternative that could be approved if the proposed Zoning Map Amendment were not adopted. If the proposed Zoning Map Amendment were adopted, the proposed project would additionally require the following actions, discussed in more detail in the following section:

- The project sponsor would seek Conditional Use authorization for dwelling-unit density in excess of one unit per 125 sq.ft. of lot area pursuant to *Planning Code* Sections 215(b) and 303 and to exempt the floor area of on-site below-market-rate units from the FAR limit pursuant to *Planning Code* Section 124(f). *Requires approval by the Zoning Administrator.*
- Because the proposed project (if rezoned) would include a Floor Area Ratio (FAR) above the base amount permitted in a C-3-G Use district, the project sponsor would seek Transfer of Development Rights (TDR) pursuant to Section 128 of the *Planning Code*. *Requires approval by the Planning Commission.*
- The project would require a Variance from the dwelling unit exposure requirement of *Planning Code* Section 140, to provide dwelling unit exposure for several units to a non-conforming open area. *Requires approval by the Zoning Administrator.*
- The proposed project would require a Variance for exceedance of the wind hazard criterion established by *Planning Code* Section 148. *Requires approval by the Zoning Administrator.*
- The project would require Downtown Permit Review (Section 309 of the *Planning Code*) for compliance with the downtown provisions of the *Planning Code*, including exceptions for exceedance of the wind comfort criterion, rear yard requirements, accessory parking above the principal permitted amount, and curb cuts for parking access on Tenth Street. *Requires approval by the Planning Commission; curb cuts would also require approval by the SFMTA.*
- The proposed project would require demolition, site, and building permits. *Requires DBI approval.*
- The proposed project would require street and sidewalk permits for construction along the street and sidewalk. *Requires DPW approval.*

E. PLANS AND POLICIES

SAN FRANCISCO PLANNING CODE AND ZONING MAP

The *Planning Code*, which incorporates the City's Zoning Maps, implements the *San Francisco General Plan* (*General Plan*) and governs permitted uses, densities, and the configuration of buildings within the City. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless (1) the proposed project conforms to the *Planning Code*, (2) allowable exceptions are granted pursuant to

provisions of the *Planning Code*, or (3) amendments to the *Planning Code* are included as part of the project.

The project site is within a C-M (Heavy Commercial) Use district and a 130-L Height and Bulk district. The C-M Use districts are intended to provide a limited supply of land for certain heavy commercial uses not permitted in other commercial districts. There is an emphasis upon wholesaling and business services, and some light manufacturing and processing are also permitted though limited in most cases to less than an entire building. In recognition of the potentially adverse effects of these heavy uses and the proximity of these districts to residential and other commercial areas, standards are imposed as to enclosure within buildings and screening of outdoor uses.⁴

Residential uses are allowable with Conditional Use authorization in C-M Use districts (*Planning Code* Section 213), while group housing, hotels, motels, institutions, offices, and various commercial, service, light manufacturing, and other non-residential uses are principally permitted. Various additional non-residential uses are conditionally allowable.

Use districts in the area surrounding the project site are mixed, including Downtown General Commercial (C-3-G) to the north (across Mission Street from the site), and a few C-M parcels to the east with greater C-M area to the west and south. There is a large Downtown Support (C-3-S) area to the east, with Service/Light Industrial/Residential (SLR) to the south, and C-M, Residential House, Three-Family (RH-3) including low scale residential along South of Market alleys in the near project vicinity, and Residential Enclave District (RED) to the west.

The project is located adjacent to, but not within two active planning areas—the Market-Octavia and Western SoMa planning areas. The Market-Octavia Plan took effect on May 30, 2008, and although the project site is not within the Plan area, environmental review of the Market-Octavia Plan area included the project site.⁵ The Market-Octavia Plan area and adjacent areas are currently undergoing transition. The proposed project and other major developments in the project vicinity are part of a trend toward increased development density, to concentrate activities along established commercial streets such as Market and Mission Streets, and to develop new housing close to established transit lines. The areas adjacent to the project site in the Market-Octavia Plan Area are within a “Van Ness-Market Downtown Residential Special Use District.” The new Market-Octavia zoning facilitates and encourages new high-density housing by lifting residential density limits, and allowing floor-area ratio bonuses above the

⁴ San Francisco *Planning Code*, Section 210.4 C-M Districts: Heavy Commercial.

⁵ City and County of San Francisco, *Market and Octavia Plan Area Final EIR*, June 19, 2007. This report is available at the Planning Department website at http://www.sfgov.org/site/planning_index.asp?id=25191, accessed for this report on April 13, 2008.

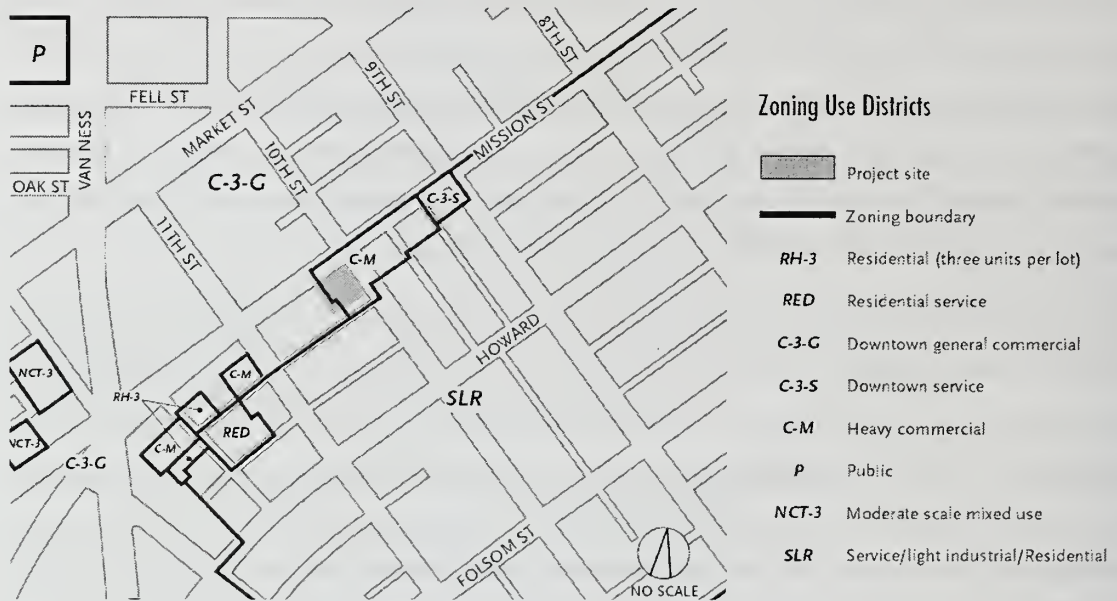
existing maximum. The Market-Octavia Plan generally lowers height limits for properties fronting Mission Street east of Van Ness Avenue from 130 feet to 85 feet, extending to the western property line of the subject property. The project site currently has a height limit of 130 feet, and is not included in the Market-Octavia Plan area. Therefore, the project, as proposed, would contrast with the height rezoning of the adjacent Market-Octavia Plan area, which reduces maximum heights from 130 to 85 feet, but would be consistent with the 130-L Height & Bulk district within which it is located. Please see Figure 9, page 44, for a map of Zoning Use districts and Height & Bulk districts in the area.

Planning efforts for the Western SoMa are at a preliminary stage, and the provisions of any future plan are uncertain. A Western SoMa Community Plan Draft for Citizens Review (August 14, 2008) indicates that future zoning for the Tenth Street corridor could continue to allow commercial and industrial uses at lower building levels with residential uses permitted only at the third floor of buildings or higher. In contrast to the Market-Octavia and Mid-Market areas, the Western SoMa Draft Plan appears to be intended to maintain the prevailing scale of development and preserve arts and light industrial uses. Increased densities could be permitted in some limited areas, such as a proposed “Downtown Folsom Corridor” between Seventh and Tenth Streets. The Western SoMa planning area terminates at Minna Street near the southern boundary of the project site.

The project site is within a 130-L Height and Bulk district that is comprised only of the project site. The 130-L Height and Bulk district limits heights to 130 feet.⁶ The City’s height and bulk districts serve a variety of urban design purposes.⁷ Principally these districts relate the height of new buildings to important attributes of the City pattern—such as the height, scale, and character of existing development—to avoid an overwhelming or dominating appearance. They also promote harmony in the visual relationships and transitions between new and old buildings. There is a variety of height and bulk districts nearby, ranging from a high of 320 feet, on the block to the north of the project site, to a low of 40 feet, adjacent to the project site to the west. Immediately north of the project site is a 150-S Height and Bulk district, and a 150-foot tall building was recently approved at the northwest corner. Immediately east of the project site at the southeast corner of the intersection of Mission and Tenth Streets is a 160-M Height and Bulk district. South of the project site is a 50-X Height and Bulk district. Immediately west of the project site is an 85-X Height and Bulk district. Permitted heights on individual blocks vary widely: on the block to the north, permitted heights range from 85 to 320 feet; on the block to the east, permitted heights range from 50 to 200 feet. Under the recently adopted Market-Octavia Plan, heights of up to 400 feet are permitted at the intersection of Market and Van Ness. Permitted building heights along Mission

⁶ San Francisco *Planning Code*, Section 252, Classes of Height and Bulk Limits.

⁷ San Francisco *Planning Code*, Section 251, Height and Bulk Districts: Purposes.



Source: City of San Francisco

2/18/09

Zoning Use and Height and Bulk Districts Figure 9

Street adjacent to and west of the project site have been reduced to 85 feet from the previously permitted 130 feet. The project site is within a Heavy Commercial (C-M) Use district, in which a residential use, such as the proposed project, requires Conditional Use authorization at a density ratio not exceeding the number of dwelling units permitted in the nearest R district (provided that the maximum density ratio shall in no case be less than that for an RM-4 district). The nearest R district to the project site is Service/Light Industrial/Residential (SLR), located immediately east of the site. Both the SLR and RM-4 districts permit up to one dwelling unit per 200 sq.ft. of lot area. Thus, the allowable residential density at the project site is one unit per 200 sq.ft. of lot area (or 57 units for the 11,424-sq.ft. lot size). The basic Floor Area Ratio (FAR) limit in the C-M district is 9.0 to 1 (*Planning Code* Table 124). Because it is a corner lot, the project site is eligible for a 25 percent floor area premium that increases the permitted FAR limit to 11.25 to 1 (*Planning Code* Section 125(a)). In summary, under the existing zoning the building could be a maximum of 130 feet in height, and could contain a maximum of 57 dwelling units and up to 128,520 gross square feet of floor area. As the project proposes 117 residential units, it is not allowable under current zoning, and the project sponsor would therefore seek a Zoning Map Amendment to reclassify the project site from a C-M to a C-3-G Use district.

Under the proposed C-3-G (Downtown General Commercial) zoning, residential density up to one dwelling unit per 125 sq.ft. of lot area is a principal permitted use (*Planning Code* Section 215(a)), while greater residential density, as determined by the Planning Commission pursuant to Section 303(c), and is a conditionally allowed use (*Planning Code* Section 215(b)). The proposed project would exceed the principal permitted density, and would therefore require Conditional Use authorization for residential density.

Overall development density in the C-3 Districts is generally regulated by Floor Area Ratio (FAR), and all uses in the C-3 Districts (with exceptions for ground-floor retail, mechanical space, parking, among others) are counted toward this total. Parcels in each C-3 district are permitted to build up to a base FAR amount (6.0:1 in the C-3-G) and then must acquire TDR in order to exceed this limit up to a maximum cap of 9.0:1 for this Use district. The Transferable Development Rights program (Section 128), is intended to preserve historic buildings throughout the downtown by requiring the purchase of unused development credits from eligible historic buildings. The proposed project at 8.57 FAR, would require the project sponsor to obtain TDR.

Planning Code Section 140 requires at least one room within a dwelling unit to face directly on an open area that is either (i) a public street or alley that is at least 25 feet in width, (ii) a side yard or rear yard that meets the requirements of the *Planning Code*, (iii) an open area that is unobstructed and is no less than 25 feet in every horizontal dimension for the floor at which the dwelling unit in question is located and the

floor immediately above it, with an increase of five feet in every horizontal dimension at each subsequent floor. A Variance is required for the exposure of several of the units overlooking the open area at the southeastern corner of the site. The open area measures 33 feet 8 inches by 47 feet 10 inches, i.e., it is at least 25 feet in every dimension. However, the open area does not increase by five feet at each succeeding level, and a Variance is therefore required.

Planning Code Section 148 establishes as a hazard criterion an equivalent wind speed of 26 mph for a single full hour per year. No building or addition that causes equivalent wind speeds to reach or exceed the hazard criterion for a single full hour of the year can be constructed. A wind tunnel test for the project indicated that the project would not cause any new hazard wind exceedances when added to existing conditions. With cumulative development, the wind tunnel test predicted a total duration of wind hazard exceedances of 109 hours per year at Tenth and Market Streets, compared to 94 hours per year under existing conditions. Analysis of margins of error of wind tunnel results in windy areas, the results of other wind studies in the area, the distance of the proposed project from the location of the exceedance, and the fact that the project is downwind of the exceedance, have led the Planning Department to determine that the project would not have a significant effect on hazard wind hours at the Tenth and Market intersection. However, the proposed project would require a Variance for exceedance of the wind hazard criterion, which the project sponsor is seeking.

Because the proposed project (if rezoned) would include construction in a C-3 district, it would require Downtown Permit Review (Section 309 of the *Planning Code*) for compliance with the downtown provisions of the *Planning Code* and exceptions to the following requirements:

- Wind Comfort Criterion. The proposed project would require approval by the Planning Commission for exceedance of the wind comfort criterion. (See IIIF. Wind, below, for discussion of wind impacts and the wind comfort criterion.) It should be noted that Section 309 approval for the comfort criterion exceedance is a separate action from the Variance sought for hazard criterion exceedance, described above.
- Rear Yard. *Planning Code* Section 134 allows the Planning Commission to reduce the 25 percent residential rear yard requirement provided the building location and configuration provide adequate light and air to residential units and open space. The proposed project would require an exception, to provide the rear yard in a courtyard at the southwestern corner of the property that is 33 feet 8 inches by 47 feet 10 inches.
- Off-Street Parking. Under *Planning Code* Sections 151.1 and 204.5, the proposed project is allowed to provide up to one off-street, accessory parking space for every four dwelling units proposed, or 29 spaces, and an additional 15 spaces for the ground-floor retail/personal service use. Pursuant to the procedures in *Planning Code* Section 309 and 151.1(e), the Planning Commission may authorize additional parking spaces up to the following amounts: up to 0.5 independently accessible spaces per unit; up to 0.75 spaces per unit for any residential unit; and up to one space

for two-bedroom units with more than 1,000 sq.ft. of occupied floor area. The project includes a three-level garage that would accommodate up to 46 self-park or 101 valet residential spaces and therefore requires an exception to authorize residential parking above the principal permitted amount.

- Curb cuts. With the proposed project, the existing curb cuts on Mission and Tenth Streets would be eliminated and new curb cuts further south on Tenth Street would be necessary to provide ingress and egress to the parking garage and loading spaces (*Planning Code* Section 155(r).

The project is subject to and would comply with the Residential Inclusionary Affordable Housing Program (*Planning Code* Sections 315 to 315.9), by providing 15 percent, or 18 affordable units, on-site within the project.⁸

The project site lies immediately outside the southeastern edge of the Market and Octavia Plan Area Van Ness/Market Downtown Transit Residential Special Use District ("Downtown Residential SUD"). (The Market-Octavia Plan was adopted on March 27, 2008 and took effect on May 30, 2008.) The Downtown Residential SUD—adjacent to the project site—uses an underlying C-3-G Use district, and encourages the development of high-density, mixed use buildings close to transit services on Market Street and Van Ness Avenue. The Market and Octavia Neighborhood Plan identifies the area as appropriate for residential development and envisions its eventual transformation into a dense, full-service neighborhood. The Market-Octavia Plan reduced heights adjacent to the project site from 130 to 85 feet.

The project site is located to the north of the Western SoMa planning area, which terminates at Minna Street near the southern boundary of the project site. A community planning process for the Western SoMa is being conducted by the Western SoMa Citizens Planning Task Force ("Task Force"), which was established by Board of Supervisors Resolution No. 731-04 in November of 2004. Guided by Planning Department staff, the *Western Soma Community Plan: Draft for Citizens Review* (Draft Western SoMa Plan),⁹ proposes a Western SoMa RCD (Residential, Commercial-Combined Use district) south of the project site. The Draft West SoMa Plan is in the early stages of environmental review and subject to change.

⁸ On August 1, 2006, the Board of Supervisors adopted amendments to *Planning Code* Section 315, increasing the percentage of required inclusionary housing units to 15 percent on-site or 20 percent off-site (the requirements before the amendment were 12 percent and 17 percent, respectively). Of the proposed project's 117 units, 18 units, or approximately 15 percent, would be designated as affordable units, which would comply with requirement in *Planning Code* Section 315.5.

⁹ Western SoMa Citizens Planning Task Force, *Western Soma Community Plan: Draft for Citizens Review*, August 14, 2008. Available online at http://www.sfgov.org/site/uploadedfiles/westernsoma/CommunityPlan/WSoMa_ComPlan_for_Citizens_ReviewVer3.pdf, accessed January 25, 2009.

San Francisco Plans and Policies

In addition to the *Planning Code*, development in the City is subject to the *General Plan*. The *General Plan* provides general policies and objectives to guide land use decisions. The proposed project is in the part of San Francisco covered by the *Downtown Area Plan*, an Area Plan of the *General Plan*. Objectives and policies in the various elements of the *General Plan* are typically duplicated in area plans, and the objectives and policies in an area plan are generally more detailed and focused. The *Downtown Area Plan* is the policy document that guides growth and development of the mixed use neighborhood in the Downtown Area, which extends from The Embarcadero to past Van Ness Avenue, north of Market Street and south to Folsom Street, and includes most of the Financial District. Environmental plans and policies are those, like the *Bay Area Air Quality Plan* and the *Bay Area 2005 Ozone Strategy*, which directly address physical environmental issues and/or contain targets or standards required to preserve or improve characteristics of the City's physical environment. The proposed project would not obviously or substantially conflict with any such adopted environmental plan or policy. The Initial Study and this EIR discuss any conflict between the proposed project and policies that relate to physical environmental issues, in the appropriate topic section.

Decision-makers will consider the compatibility of the proposed project with *General Plan* and *Downtown Area Plan* policies that do not relate to physical environmental issues in their deliberations over whether to approve or disapprove the proposed project.

GENERAL PLAN AND DOWNTOWN AREA PLAN POLICIES

The San Francisco Planning Commission adopted an updated Housing Element of the General Plan in May 2004. The San Francisco Board of Supervisors approved the Housing Element in September 2004, and the State Department of Housing and Community Development certified the Element in October 2004. In June 2007, however, the First District Court of Appeals ruled that the updated Housing Element should have been addressed in an EIR. Therefore, this EIR refers to relevant policies of both the 2004 Housing Element and the 1990 Residence Element (the previous version).

The 2004 Housing Element of the General Plan "sets forth objectives, policies, and implementing programs to address the issues of housing production and affordability in part through a Citywide Action Plan (CAP), which "explores comprehensively the issue of how to meet the need for housing and jobs in ways that capitalize upon and enhance the best qualities of San Francisco as a place." The objectives of the 2004 Housing Element address new housing supply, housing retention, housing condition, affordability, housing choice, homelessness, density/design/quality of life, and state and regional needs. With regard to housing production, Policy 1.1 of the 2004 Housing Element encourages

higher residential density in areas adjacent to downtown and locating housing in areas well served by transit. This policy is similar to Policy 1.1 in the 1990 Residence Element; the 2004 Housing Element also calls for allowable densities in established residential areas to be set at levels, which will promote compatibility with prevailing neighborhood scale and character. Density/design/quality of life policies in the 2004 Housing Element include Policy 11.1, a new policy which calls for using new housing as a means to enhance neighborhood vitality and diversity, and Policy 11.5, which promotes well-designed housing that enhances existing neighborhood character. The corresponding policy in the 1990 Residence Element calls for housing that conserves existing neighborhood character. The proposed project would contribute 117 units to the City's housing supply, thereby helping to meet the City and regional needs for housing. In addition, the sponsor would designate 18 of these units as affordable housing on site, in compliance with the City's Residential Inclusionary Affordable Housing Program. The project would increase the density of the project site and vicinity, and the proposed building would be taller than the existing structure on the project site. The potential impact of the project on visual quality and neighborhood character are discussed in Section III.A. (Land Use and Zoning) and III.B. (Aesthetics) of this EIR.

A conflict between a proposed project and a *General Plan* policy does not, in itself, indicate a significant effect on the environment within the context of CEQA. Any physical environmental impact that could result from such conflicts is analyzed in this EIR. In addition to considering the inconsistencies that effect environmental issues, the Planning Commission considers other inconsistencies with the General Plan, independent of the environmental review process, as part of a decision to approve or disapprove a proposed project. Any potential conflict not identified in this environmental document would be considered in that context and would not alter the physical environmental effects of the proposed project that are analyzed in this EIR.

Priority Policies

As noted in the Initial Study (Appendix A, page 27), in November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the City *Planning Code* to establish eight Priority Policies. These policies, and the sections of the Initial Study and this EIR addressing the environmental issues associated with the policies, are: (1) preservation and enhancement of neighborhood-serving retail uses; (2) protection of neighborhood character (Initial Study Question 1c, Land Use; EIR Section IIIA. Land Use and Zoning); (3) preservation and enhancement of affordable housing (Initial Study Question 3b, Population and Housing, with regard to housing supply and displacement issues); (4) discouragement of commuter automobiles (Initial Study Questions 5a, b, f, and g, Transportation and Circulation); (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership (Initial Study

Question 1c, Land Use); (6) maximization of earthquake preparedness (Initial Study Questions 13 a-d, Geology and Soils); (7) landmark and historic building preservation (Initial Study Question 4a, Cultural Resources); and (8) protection of open space (Initial Study Questions 8 a and b, Wind and Shadow, and Questions 9a and c, Recreation).

Prior to issuing a permit for any project that requires an Initial Study under the California Environmental Quality Act (CEQA), and prior to issuing a permit for any demolition, conversion, or change of use, and prior to taking any action that requires a finding of consistency with the *General Plan*, the City is required to find that the proposed project or legislation would be consistent with the Priority Policies. As noted above, the consistency of the proposed project with the environmental topics associated with the Priority Policies is discussed in the Initial Study and in Section III of this EIR. The case report and approval motions for the project will contain the Department's comprehensive project analysis and findings regarding consistency of the proposed project with the Priority Policies.

The Sustainability Plan

In 1993, the San Francisco Board of Supervisors established the Commission on San Francisco's Environment, charged with, among other things, drafting and implementing a plan for San Francisco's long-term environmental sustainability. The notion of sustainability is based on the United Nations definition that "a sustainable society meets the needs of the present without sacrificing the ability of future generations and non-human forms of life to meet their own needs." The *Sustainability Plan for the City of San Francisco* was a result of community collaboration with the intent of establishing sustainable development as a fundamental goal of municipal public policy (Department of the Environment, 1997).

The *Sustainability Plan* is divided into 15 topic areas, 10 that address specific environmental issues (air quality; biodiversity; energy, climate change and ozone depletion; food and agriculture; hazardous materials; human health; parks, open spaces, and streetscapes; solid waste; transportation; and water and wastewater), and five that are broader in scope and cover many issues (economy and economic development, environmental justice, municipal expenditures, public information and education, and risk management). Additionally, the *Sustainability Plan* contains indicators designed to create a base of objective information on local conditions and to illustrate trends toward or away from sustainability. Although the *Sustainability Plan* became official City policy in July 1997, the Board of Supervisors has not committed the City to perform all of the actions addressed in the plan. The *Sustainability Plan* serves as a blueprint, with many of its individual proposals requiring further development and public comment. Because the proposed project would be considered "in-fill development" and would be developed in an

area already served by existing infrastructure and within a public transit network, it would not obviously or substantially conflict with the *Sustainability Plan*.

REGIONAL PLANS AND POLICIES

The five principal regional planning agencies and their over-arching policy/plans to guide planning in the nine-county bay area include (1) the Association of Bay Area Governments' "A Land Use Policy Framework" and *Projections 2005*, (2) the Bay Area Air Quality Management District's (BAAQMD's) *Clean Air Plan (CAP)* and *Bay Area 2005 Ozone Strategy*, (3) the Metropolitan Transportation Commission's *Regional Transportation Plan (RTP)—Transportation 2030*, (4) the San Francisco Regional Water Quality Control Board's (RWQCB's) *San Francisco Basin Plan*, and (5) the San Francisco Bay Conservation and Development Commission's *San Francisco Bay Plan*. There would be no potential conflicts with regional plans, due to the project.

PAGE INTENTIONALLY LEFT BLANK

III. ENVIRONMENTAL SETTING AND IMPACTS

A. LAND USE

The Initial Study (see Appendix A), which evaluated a 16-story mixed use development, found that the change from a single-story commercial building would have a less-than-significant project-specific land use impact. The conclusions for the previously proposed 16-story project also apply to the currently proposed 14-story project. The proposed project would not physically divide an established community, conflict with adopted land use plans adopted for the purpose of mitigating an environmental impact, or substantially and adversely alter the vicinity's character. For additional analysis regarding the project-specific land use impacts, see the discussion on page 30 of the attached Initial Study. Project-specific land use issues also are discussed in this section for informational purposes. Considering development under construction and development in the reasonably foreseeable future, the Initial Study found that development of the project site could potentially result in cumulative land use impacts, which are evaluated in this section.

SETTING

Land Use

The project site is located in the northeast portion of San Francisco within the Mid-Market area of the South of Market neighborhood. The proposed project is one block south of Market Street, approximately two blocks south of the Civic Center area, and approximately one and one-half blocks east of Van Ness Avenue. Land uses in the project vicinity (approximately two blocks from the project site) are mixed and include commercial, office, retail (including apparel), restaurant, public storage, parking lots, and residential uses. (See Figure 10, page 54, for a map of existing land uses in the project vicinity.) Within the project vicinity, there are many buildings of different type, size, and age. On the project block, heights vary from one to seven stories. Most buildings in the project vicinity are one to five stories, but heights

III. ENVIRONMENTAL SETTING AND IMPACTS
A. LAND USE



Source: City of San Francisco
2-18-09

Existing Land Uses in the Project Vicinity Figure 10

range up to 30 stories. Buildings south of Mission Street are a maximum of seven stories in height, while buildings north of Mission Street range up to 30 stories. In addition to the existing buildings in the site vicinity, which include residential, a number of projects with more intense land uses are under construction, approved, or under review in the area north of Mission Street, identified below.

Existing residential buildings in the project vicinity include:

- the three-story building immediately south of the project site (122 Tenth Street);
- the three-story 154 Tenth Street building (approximately one-half block from the project site);
- the three-story 1328 Mission Street building (approximately one-half block from the project site);
- the three-story 98 Ninth Street building (approximately one block east of the project site);
- the three-story, three-unit building at 920 Natoma Street (approximately one block from the project site);
- the four-story, eight-unit building at 940 Natoma Street (approximately one block from the project site);
- the two-story, two-unit building at 956-958 Natoma Street (approximately one block from the project site);
- the three-story, four-unit building at 960 Natoma Street (approximately one block from the project site);
- the two-story building at 965 Natoma Street (approximately one block from the project site);
- the two-story building at 967 Natoma Street (approximately one block from the project site);
- the two-story building at 955 Natoma Street (approximately one block from the project site); and
- the two-story building at 959 Natoma Street (approximately one block from the project site).

The following project north of Market Street in the project vicinity is recently completed:

- the 179-unit, 17-story Argenta project at One Polk Street (approximately one block north of the site).

The following projects north of Mission Street in the project vicinity are under construction:

- the 1,900 unit, 24-story mixed use residential/retail Trinity project at 1177 Market Street located on the southeast corner of Market and Eighth Streets,
- the 56-unit, eight-story mixed use residential/office/retail project at 77 Van Ness located on the southwest corner of Van Ness Avenue and Fell Street, and
- the Mercy Housing project at Ninth and Tenth Streets between Mission and Jessie Streets, which includes the following two affordable housing developments:
 - (1) a 123-foot-tall, 12-story, 136-unit affordable family housing project at the northeast corner of Tenth and Mission Streets, and
 - (2) a 107-unit, 11-story, approximately 115-foot-tall affordable senior housing project at Ninth and Jessie Street.

The following projects north of Mission Street in the project vicinity have been approved:

- the 720-unit, 35-story 1401 Market Street project at the southwest corner of Market and Tenth Streets,
- 260 dwelling units at 55 Ninth Street, proposed by Argenta; and
- 137 affordable rental units at 1400 Mission Street, proposed by the Tenderloin Neighborhood Development Corporation (TNDC) and Citizen's Housing.

The following residential project north of Market Street in the vicinity is under review:

- Fox Plaza at Market and Hayes Streets, which would add 250 dwelling units to the 443 units already on the site.

The recently completed, under construction, approved, and under review developments would add a total of approximately 3,745 residential units to the area north of Mission Street.

See Figure 11 on page 57 for a map of the projects listed above.

The project site is currently developed with an existing one-story commercial building and paved parking area. Adjacent to the project site, to the west, is 1449-1453 Mission Street, of which the western portion is occupied by a five-story office building and the eastern portion (adjacent to the project site) is occupied by a fenced, paved surface parking area. Adjacent to the project site, to the south, is a three-story residential hotel building with a social service use on the ground floor and residential uses above (122 Tenth Street). Tenth Street is located east of the project site, and Mission Street runs along the northern property line of the project site.

Land uses along the south side of Mission Street on the project block west of the 1449-1453 Mission Street building include a paved surface parking area, and a seven-story light industrial building containing a storage business (1475 Mission Street) at the southeast corner of Mission and Eleventh Streets. Land uses on the south side of Mission Street east of Tenth Street include, between Tenth and Grace Streets, a three-story industrial building (1375-1385 Mission Street) and a paved surface parking area. Between Grace Street and Washburn Street, from west to east, are a vacant one-story church building (1349 Mission Street), a one-story office building (1345 Mission Street), a two-story office building (1339 Mission Street), and a three-story industrial building (1337 Mission Street). Between Washburn and Ninth Streets is a one-story commercial building (1321 Mission Street/104 Ninth Street).

Existing land uses across the street from the project site along the north side of Mission Street also consist of non-residential uses. Opposite the project site on the north side of Mission Street is a paved surface parking lot. Between the parking lot and Eleventh Street, occupying the remainder of the block to the west, is the existing six-story portion of the mixed use (office including Bank of America, commercial, and



● Existing ○ Under construction ■ Approved □ Under review

- | | | | |
|-----------------------|---------------------------|---|------------------------|
| 1 122 Tenth Street | 7 956-958 Natomast Street | 13 1 Polk Street | 18 Fox Plaza |
| 2 154 Tenth Street | 8 960 Natomast Street | 14 1401 Market Street | 19 1400 Mission Street |
| 3 1328 Mission Street | 9 965 Natomast Street | 15 Mercy Housing A Affordable family housing B Senior housing | 10 55 Ninth Street |
| 4 98 Ninth Street | 10 967 Natomast Street | | |
| 5 920 Natomast Street | 11 955 Natomast Street | 16 77 Van Ness Street | |
| 6 940 Natomast Street | 12 959 Natomast Street | 17 1177 Market Street | |

Source: During Associates

2-18-79

Residential Developments in the Vicinity Figure 11

parking) 1455 Market Street building, which extends from Mission Street to Market Street along Eleventh Street and has an existing 20-story tower on the Market Street corner. East of the project site, the north side of Mission Street between Tenth and Ninth Streets is occupied primarily by non-residential uses. The northeast corner of Mission and Tenth Streets is a construction site for a Mercy Housing project. Farther east are a four-story commercial/office building (1370-1372 Mission Street), a four-story light industrial building (1360 Mission Street), a vacant two-story commercial building (1340 Mission Street), a four-story commercial building (1338 Mission Street), a three-story loft-style residential building (1328 Mission Street), a two-story commercial building (1310 Mission Street), and, at the northwest corner of Mission and Ninth Streets, a three-story building with a ground-floor restaurant and residential above (98 Ninth Street). Land uses north of the project site are primarily non-residential; however, they include residential uses as described on page 55.

South of the project site is the three-story residential hotel building mentioned above. Farther south, at the northwest corner of Tenth and Minna Streets, is a three-story industrial building (128-130 Tenth Street). On the west side of Tenth Street between Minna and Natoma Streets from north to south are a two-story commercial/office building (138-142 Tenth Street), a three-story residential building (154 Tenth Street), and a two-story building with ground-floor auto service and office above (160 Tenth Street). On the west side of Tenth Street between Natoma and Howard Streets is a two-story light industrial (public storage) building (190 Tenth Street/1436 Howard Street). The east side of Tenth Street, south of the project site, is occupied by non-residential uses. At the southeast corner of Mission and Tenth Streets is the paved parking lot for the adjacent business mentioned above. Farther south, on the east side of Tenth Street, are a three-story commercial building (113 Tenth Street), a vacant three-story retail/office building (115 Tenth Street), a three-story commercial/office building (123-127-131 Tenth Street), a vacant three-story commercial/office building (141 Tenth Street), a vacant two-story commercial building (147-149 Tenth Street), a two-story light industrial building (151 Tenth Street), a one-story commercial building (165 Tenth Street), and, at the northeast corner of Tenth and Howard Streets, a four-story office building.

North of Mission Street, on the west side of Tenth Street between Jessie and Market Streets, a 35-story, 720-unit residential building (1401 Market Street) has been approved. On the east side of Tenth Street between Jessie and Stevenson Streets is an 11-story office building (875 Stevenson Street).

IMPACTS

Significance Criteria

A project would have a significant land use effect on the environment if it were to:

- Disrupt or divide the physical arrangement of an established community.
- Have a substantial adverse impact on the existing character of the vicinity.
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the *General Plan*, specific plans, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

As discussed in II. Project Description, page 29, the proposed project would demolish the existing commercial building and remove the surface parking lot. It would construct a 14-story, 130-foot-tall mixed use building, with about 2,742 sq.ft. of ground-floor commercial space, 117 residential units above, and a three-level subterranean garage with up to 46 independently-accessible, or 101 valet parking spaces, plus 15 commercial parking spaces.

Impact Analysis

PROPOSED PROJECT

The Initial Study (see appendix A) determined that the previously proposed 16-story project would have a less-than-significant effect on a project level for the Land Use criteria above. Specifically, the proposed project would not divide the physical arrangement of its block or surrounding area. The proposed new building would be constructed within the existing lot boundaries, would not interfere with or change the existing street plan, and would not impede the passage of persons or vehicles. The surrounding uses and activities would interrelate with each other as they currently do. For similar reasons, the project-level land use impacts of the currently proposed 14-story project, for the Land Use criteria above, also would be less than significant. The proposed project would not obviously or substantially conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. The proposed project would be more similar to high-rise residential uses north of the project site, and would extend such uses to the South of Market area. The project would not be like some other uses in the near project vicinity including low-scale commercial uses. While the project would intensify residential development in the area, residential use is an existing use in the vicinity and the project impact would be less than significant.

CUMULATIVE

Cumulative development would not physically divide an established community, or conflict with any policy adopted for the purpose of avoiding or mitigating an environmental impact. The project site is in a developed urban area in transition, with non-residential land uses such as PDR and surface parking being replaced in some locations by mid- to high-rise, multi-family residential and mixed use buildings. The Setting section, above, page 55, lists developments that are under construction, have been approved, or are being reviewed within a two-block radius to the north and west along Market and Mission Streets. The program-level analysis of the Market-Octavia Plan estimated that implementation of that plan, including portions of the Mid-Market, SoMa West, and Western Addition A-2 Plan areas, would result in construction of about 4,440 new housing units, with the highest residential density in the eastern part of the Plan area, adjacent to which the 1415 Mission project site is located. (The project site is not within the Market-Octavia Plan area, but is within the area analyzed by the Market-Octavia Plan EIR.) The Final Market-Octavia Plan EIR found that this increase would represent a less-than-significant land use impact.¹⁰ Eight of the nine housing projects listed on page 55 that are recently constructed, under construction, approved, or under review fall within the Market-Octavia Final EIR boundaries,¹¹ and would contribute 1,845 of the 4,440 residential units. When combined with the proposed project, the eight housing projects, if built, would contribute 1,962 residential units. Under cumulative conditions (if the proposed project and all nine cumulative projects listed above were constructed), 3,862 residential units would be built. This cumulative development would represent a substantial increase of residential units over current conditions, which would change the existing land use character of the project area into a high-density mixed use and transit-oriented neighborhood, which may be considered a substantial change in the character of the vicinity. However, these recently constructed, under-construction, approved, or proposed projects are located on infill sites, and their uses are allowable and consistent with the existing and planned land uses in the vicinity. The cumulative changes in land use would be consistent with the goals of the *General Plan* to increase housing in the City, reduce dependence on automobiles, and improve the value of streets as civic places, and therefore the cumulative development would not be considered an adverse impact. For the above reasons, cumulative development, including the proposed project, would not represent a significant land use impact in the area. The proposed project's 117 residential units would represent approximately three percent of the 3,901 cumulative residential units discussed above, and would not substantially contribute to the cumulative impact.

¹⁰ Market-Octavia Final EIR, op cit, page 4-43.

¹¹ All cumulative residential developments listed on page 43, except the 1,900-unit Trinity project at 1177 Market Street, fall within Market-Octavia Final EIR boundaries.

To encourage new housing while preserving sufficient lands for the projected future growth of PDR businesses and activities, the Planning Department (Department) adopted changes in the *Planning Code* (zoning) controls, as well as amendments to the General Plan, for a 2,345 acre area on the eastern side of San Francisco officially referred to as the "Eastern Neighborhoods." The project site is outside of the Eastern Neighborhoods area; the existing building was formerly occupied by an auto retail and service, and could theoretically be occupied by PDR again. However, the building on the site is small (5,000 sq ft), and the cumulative effect of the project on PDR space also would be small. For this reason, and because the project site is outside the Eastern Neighborhoods area, the project would not make a considerable contribution to cumulative impacts on PDR space.

B. AESTHETICS

This section discusses potential visual impacts of the proposed project. The Initial Study evaluated a 16-story, 150-foot tall commercial-residential building, and found that the change from a single-story, 18-foot-tall commercial building would not have a substantial demonstrable negative effect on scenic vistas, scenic resources, private views, or project-specific visual character, nor would it create a new source of obtrusive light and glare. The conclusions for the previously proposed 16-story project also apply to the currently proposed 14-story project. The Initial Study determined that cumulative effects on visual character of the area will be analyzed in the EIR, and that the project's effect on scenic vistas and views will be discussed in this EIR for informational purposes. This section analyzes the cumulative effects of the proposed project on the visual character of the project site and its surroundings, and discusses effects on scenic vistas and views for informational purposes.

SETTING

San Francisco has many scenic views from its hilltops and from locations near the Pacific Coast or San Francisco Bay. The height and location of buildings, structures, and other physical elements define view corridors by directing lines of sight along street walls and down streets. Some of San Francisco's view corridors, particularly those down its numerous hills, yield spectacular views of San Francisco Bay. The *General Plan* identifies the importance of recognizing and protecting major views in the City, with particular attention to views of open space and water.¹² The *General Plan's* Urban Design Element identifies Tenth Street between Market and Mission Streets as a "Street Area Important to Urban Design and Views" on its unnumbered map titled "Street Areas Important to the Perception of the City." The unnumbered Urban Design Element Map titled "Streets Important for Their Quality of Views" identifies this portion of Tenth Street as having an "average" quality of street views. Map 3 of the Urban Design Element titled "Where Streets Are Most Important as Sources of Light, Air and Open Space" identifies this section of Tenth Street as being an important source of light and air.

The topography of the project area is essentially level, with surrounding urban development (mainly to the north), which together limit views of other parts of the City, to narrow segments of the skyline visible along the corridors of Mission and Tenth Streets. The Mission and Tenth Street view corridors yield typical urban views of cars, the buildings of a mixed use district, skyline, and sky. Pedestrians and drivers see limited views of the project site from nearby portions of Mission and Tenth Streets. Intervening buildings screen views of the project site from more distant street-level vantage points.

¹² *San Francisco General Plan*, Urban Design Element, Objective 1, Policy 1.1.

The nearest public open spaces in the project vicinity include: the Joseph L. Alioto Performing Arts Piazza (Civic Center Plaza), located three blocks to the north; Howard and Langton Mini-Park, located approximately four blocks east; Victoria Manalo Draves Park, located approximately five blocks east of the project site; and Hayes Green (also known as Patricia's Garden), located approximately five blocks northwest. None of these open spaces are visible from street-level vantage points at the project site, and the project site is not visible from these open spaces, under existing conditions.

Scenic resources could include trees, rock outcroppings, and other features of the built or natural environment that contribute to a scenic public setting. In the case of the project site, the existing building and surface parking lot cover the entire site. There are no existing street trees along the Mission or Tenth Street frontages of the site.

The exterior lighting at the site is similar to that of other commercial and PDR uses in the vicinity. Commercial storefronts, signs, streetlights, and residences all contribute to nighttime light conditions in the area.

The project site contains an existing one-story, 18-foot-tall commercial building and a surface parking lot. On the project block, heights vary from one to seven stories. Most buildings in the project vicinity are in the range of one to five stories, while buildings south of Mission Street are a maximum of seven stories in height, and buildings north of Mission Street range up to 30 stories. The immediate project vicinity is characterized by a variety of building design and land uses, ranging from traditional one- to seven-story buildings to the modern 30-story residential/ commercial/office Fox Plaza tower one block north of the site (on Market Street), the 11-story office building at 875 Stevenson Street one-half block north of the site, and the six- to 20-story 1455 Market Street building one-half block northwest of the site. Development to the east across Tenth Street consists of non-residential uses in one- to four-story buildings. Development to the west of the project site on Mission Street includes a paved surface parking area and a seven-story light industrial building. Adjoining the project site to the south, there are mid-rise residential buildings. To the south, development along Howard Street near Tenth Street includes two- to four-story non-residential buildings. The approximately 90-foot-tall St. Joseph's Church (1401 Howard Street), designated San Francisco Landmark Number 120, is located on the southwest corner of Tenth and Howard Streets, one block south of the proposed project site. There are scattered multi-family residential buildings, including the building immediately south of the proposed project at 122 Tenth Street as well as buildings to the south and east, but most buildings in the vicinity are occupied by a variety of non-residential uses.

A number of projects are recently constructed, under construction, approved, or proposed north of the site and north of Mission Street in the project vicinity. The 17-story Argenta residential project north of Market Street at One Polk Street in the project vicinity has been recently constructed. The following projects north of Mission Street in the project vicinity are under construction: the 1,900 unit, 24-story mixed use residential/retail Trinity project at 1177 Market Street located on the southeast corner of Market and Eighth Streets; the 56-unit, eight-story mixed use residential/office/retail project at 77 Van Ness located on the southwest corner of Van Ness Avenue and Fell Street; and the affordable Mercy Housing project at Ninth and Tenth Streets between Mission and Jessie Streets. The following projects north of Mission Street in the project vicinity have been approved: the 720-unit, 35-story 1401 Market Street project at the southwest corner of Market and Tenth Streets, 260 dwelling units in a high-rise residential development at 55 Ninth Street, proposed by Argenta; and 137 affordable rental units at 1400 Mission Street, proposed by the Tenderloin Neighborhood Development Corporation (TNDC) and Citizen's Housing. The 120-foot-tall Fox Plaza addition at Market and Hayes Streets is currently under formal review by the Planning Department.

IMPACTS

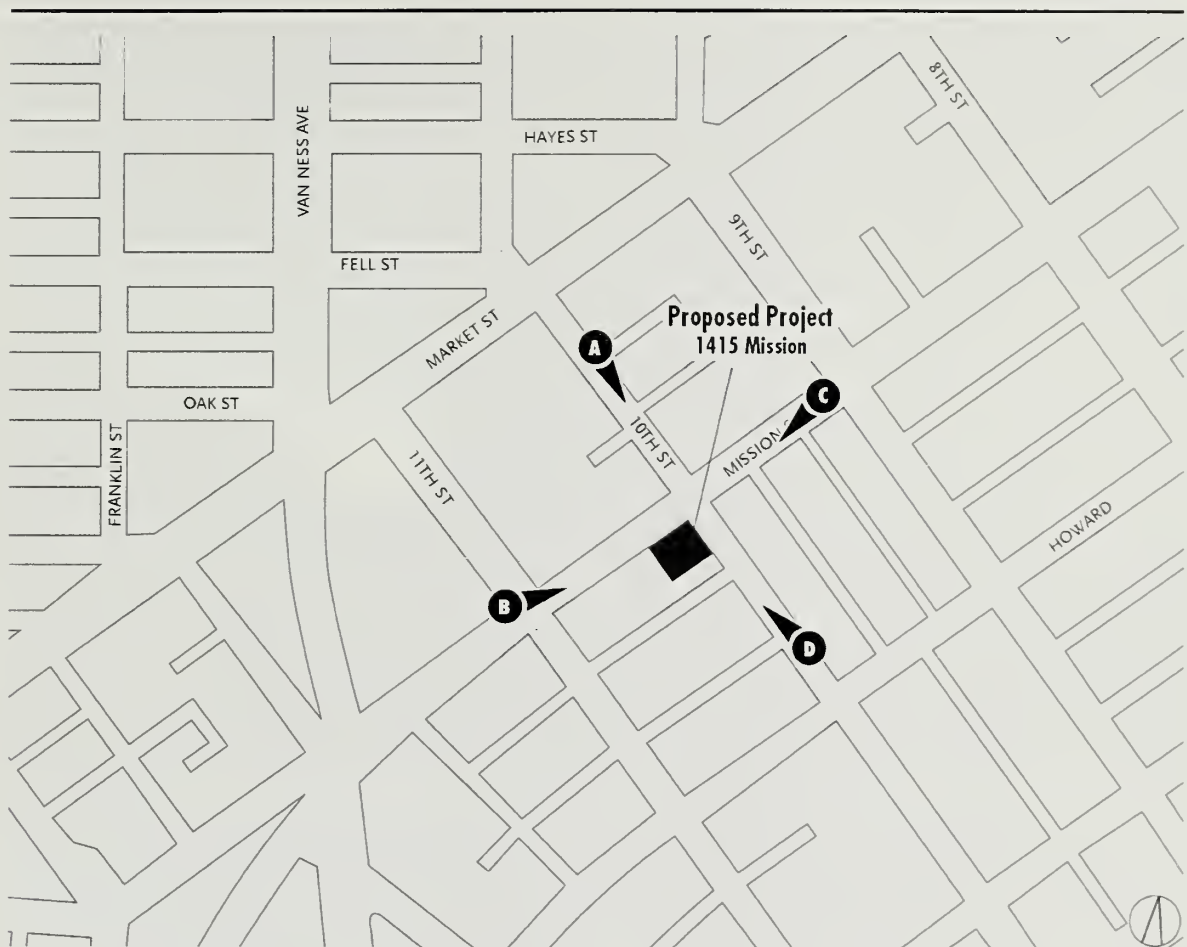
Significance Criteria

A project would have a significant aesthetic effect if it would:

- Substantially and adversely degrade a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment, which contribute to a scenic public setting;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or which would substantially impact other people or properties.

Impact Analysis

Four views of the project site show existing conditions and photosimulated views of the proposed project. Figure 12, page 65, shows the locations of these viewpoints. Figure 13, page 66, is a view of the north and east sides of the proposed building, looking south along Tenth Street between Market and Jessie Streets. Figure 14, page 67, is a view of the west and north sides of the project site and the proposed building, looking east along Mission Street near Eleventh Street. Figure 15, page 68, is a view of the east and north sides of the project site and the proposed building, looking west along Mission Street near Ninth Street. Figure 16, page 69, is a view of the south and east sides of the project site and the proposed building, looking north along Tenth Street south of Natoma Street.



- A** Arrow shows direction of photo view
- A** View looking southeast on Tenth Street near Market Street
 - B** View northwest on Mission Street at Eleventh Street
 - C** View southwest on Mission Street at Ninth Street
 - D** View northeast on Tenth Street near Howard Street

Source: During Associates
1-26-09

Viewpoint Locations Figure 12

Existing View



Proposed View



Source: Square One Productions and Heller Manus Architects

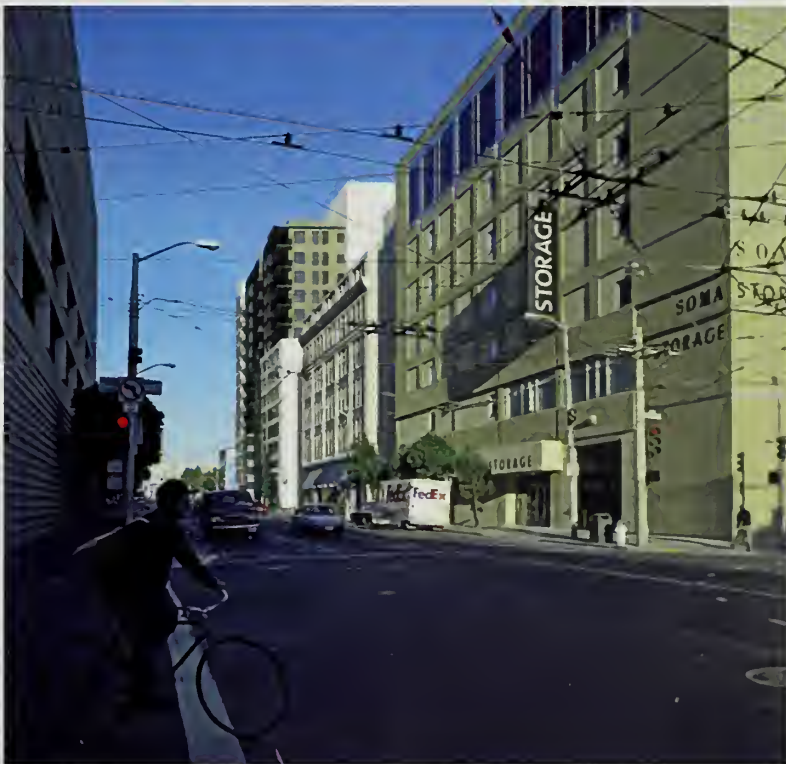
9/26/08

View Looking South on Tenth Street near Market Street Figure 13

Existing View



Proposed View



Source: Square One Productions and Heller Manus Architects

12-21-08

View Looking East on Mission Street at Eleventh Street Figure 14

Existing View



Proposed View



Source: Square One Productions and Heller Manus Architects

View Looking West on Mission Street at Ninth Street Figure 15



Existing View



Proposed View

Source: Square One Productions and Heller Manus Architects

9-26-08

View Looking North on Tenth Street near Howard Street Figure 16

This analysis considers the proposed project in the context of the overall visual character of the neighborhood. Architecture and design considerations are subjective and are not the focus of the analysis of aesthetic impacts in environmental review. Building architecture and design will be addressed in detail by the Planning Department and the Planning Commission as part of the project approval process.

Figure 13, page 66, illustrates a view looking south along Tenth Street between Market and Jessie Streets, showing the proposed building. The proposed project would introduce a visually prominent element, substantially taller and contrasting with the skyline of low-rise buildings south of Mission Street.

Figure 14, page 67, illustrates a view looking east along Mission Street near Eleventh Street, showing the proposed building. The visual prominence of the project would be reduced by the presence of vertical streetwalls on both sides of Mission Street, especially the vertical streetwall formed by structures that extend west of the project site on the south side of Mission Street.

Figure 15, page 68, shows the proposed building, looking west along Mission Street near Ninth Street. The proposed project would introduce a visually prominent element, substantially taller and contrasting with the skyline of low-rise buildings south of Mission Street and east of the site. It would also be the most prominent structure on the south side of Mission Street from this vantage point.

Figure 16, page 69, a view looking north along Tenth Street south of Natoma Street, also shows the proposed project. From this perspective, the proposed project would replace the one-story commercial building currently on-site with a larger 14-story building that would be one of the more prominent structures at mid range in this view. The height and mass of the project would be part of a trend and transition from the smaller structures south of Mission Street to the taller and bulkier projects proposed or under construction north of Mission Street, (e.g., the proposed 30-story Fox Plaza tower one block north of the site, and the 28-story south tower of the 100 Van Ness Avenue building, approximately two blocks north of the project site, views in which the proposed project would intervene).

The proposed building's height and form would reflect building types, heights, and massings of taller buildings found in the project vicinity, primarily to the north as discussed above. The façades of the proposed project would feature a combination of sections with glass curtain walls (which would include the ground-floor retail space) and sections with vertical walls articulated with windows and interspersed balconies, and contrasting colors. The appearance of the project would differ from early twentieth century buildings in the vicinity but the contemporary, rectilinear design and ground-floor retail space of the proposed project would be consistent with the nearby late twentieth century buildings and approved high-rise buildings. The proposed project would add street trees along both the Mission and Tenth Street frontages, softening the street-level aesthetics of the proposed structure.

The proposed project would be the tallest structure on the project block and among one of the taller structures in the neighborhood, and would therefore be visually prominent. The scale and massing of the proposed project would exceed that of most nearby buildings, and would be similar to the taller existing and approved buildings on the north side of Mission Street in the project vicinity. The project would be visually consistent with the heights of buildings to the north, and somewhat consistent with buildings to the west, but the project would be taller than and visually inconsistent with existing buildings to the east and south.

The proposed project would not substantially alter nor adversely affect existing scenic public views or view corridors. The Joseph L. Alioto Performing Arts Piazza is a one-square-block park in the block bounded by Polk, McAllister, Larkin, and Grove Streets. The southern portion of the Piazza faces the project site; however, intervening buildings, including the 30-story Fox Plaza tower, the 20-story 1455 Market Street building, the 35-story 1401 Market Street building currently under construction, and the approved 123-foot-tall residential building at the northwest corner of Tenth and Mission Streets, would screen views of the entirety of the proposed project. Due to the greater distance between the project site and other open space areas, such as Howard and Langton Mini-Park, Victoria Manalo Draves Park, and Hayes Green, and the presence of intervening buildings, the upper floors of the proposed project may be visible from some locations in these parks. For these reasons, the effects on views from these parks would also be less than significant, as indicated on page 36 of the Initial Study. Due to intervening buildings, the project would not substantially alter street-level views to the south along Tenth Street toward St. Joseph's Church, which is located one block south of the project site. In summary, the proposed project would not substantially degrade or obstruct any scenic view or vista observed from public areas, as indicated on page 37 of the Initial Study.

The proposed project would be visible from some residential buildings in the area, including the second and third floors of the 122 Tenth Street building, directly south of the project site, the residential building at 154 Tenth Street farther south, the residential building at 1328 Mission Street, the upper residential floors of the 98 Ninth Street building at the northwest corner of Ninth and Mission Streets, and some of the north-facing windows of the residential buildings at 920, 940, 956-958, and 960 Natoma Street, one block southwest of the project site. From all of these private residences, the proposed project could block views of the surrounding buildings and portions of the sky. Reduced private views from some nearby residences would be an unavoidable consequence of the proposed project and would be an undesirable change for those individuals. Given the dense urban setting of the proposed project and the limited extent of the reduction in private views, the proposed project's impact on private views would not be considered a potentially significant environmental impact.

The proposed project's lighting would be consistent with lighting typical of other high-rise buildings in the project vicinity, and the project would comply with Planning Commission Resolution 9212, which prohibits the use of mirrored or reflective glass. The proposed project would not generate obtrusive light or glare that would substantially impact other properties and would therefore not be a significant impact of the proposed project, as indicated on page 39 of the Initial Study.

The proposed in-fill development project would intensify the use of the site, and would result in a change in visual character relative to surrounding development to the east and south, as well as the recently adopted Market-Octavia Plan, which generally lowers height limits for properties fronting Mission Street east of Van Ness Avenue from 130 feet to 85 feet, extending to the western property line of the project site. The height limit for the project site was not changed from 130 feet, and the project height would conform to its height limit. The project would be notably taller than existing development to the east, south, and west. The proposed project's final architectural design and articulation would undergo evaluation by the Planning Department and Planning Commission as part of the project review, a process separate from the environmental review. The proposed project's final design would be determined at that time. Design and aesthetics are by definition subjective and open to interpretation by decision-makers and members of the public. The proposed project would not cause a substantial and demonstrable negative visual change, and its aesthetic and urban design impact would be less than significant.

As discussed above, the proposed project would not have a substantial demonstrable negative effect on a scenic vista, damage scenic resources, degrade the site's or surrounding area's visual character, or create a new source of obtrusive light and glare. The proposed project would therefore have a less-than-significant aesthetic impact.

Cumulative Effects

The project site is in a developed urban area, and near the border of an area in transition. To the north, older, low-rise non-residential buildings are being replaced by high-rise, multi-family residential and mixed use buildings of contemporary design, while areas to the east, south, and west consist of low- to mid-rise commercial, PDR, and residential buildings. New, high-rise residential buildings are generally located north of the project site. The Setting section, page 64, lists developments that are under construction, have been approved, or are being reviewed within a two-block radius to the north and west along Market and Mission Streets. These projects would contribute to a cumulative aesthetic impact on the surrounding neighborhood. Although views of the skyline along street corridors in the vicinity would be affected by new residential high-rise structures, these proposed projects would not substantially degrade the existing visual character. With or without the proposed project, the visual character and

intensity of development in the project vicinity would change due to the development detailed above under the cumulative scenario (page 64). Furthermore, the proposed project would not block a scenic view or vista. The Market-Octavia Plan Final EIR analyzed the Market-Octavia Plan's effect on visual quality, as well as that of portions of the Mid-Market, SoMa West, and Western Addition A-2 Plans. The Market-Octavia Final EIR developed computer-generated visual massing studies of the maximum "build-out" of Height and Bulk districts proposed by the plans, and found the impact of implementation of the Plans on visual quality in the site vicinity to be less-than-significant. The project site and eight of the nine project sites listed above on page 64 were included in the analysis.¹³

The visual impacts of the proposed project would not rise to a level of significance, and would not change the determination of the Market-Octavia EIR that cumulative development is less than significant. Building heights on the south side of Mission Street where the project site is located range up to a maximum of seven stories, and building heights north of Mission Street range up to 30 stories; therefore, the project would relate more to the buildings on the north and contrast more with the surrounding development to the east, south, and west. In the project vicinity is the site of the under-construction Trinity project (1177 Market Street), which is demolishing a seven-story building and a partially undeveloped lot, and replacing them with a structure built to the lot lines up to 240 feet in height. Taken together, the proposed project, the Trinity project, and the eight projects on project sites that were analyzed under the Market-Octavia EIR, would result in visual changes in the vicinity of the proposed project. Some of the changes include removing visual elements with neutral or low aesthetic value, including surface parking lots, and in some cases, dilapidated buildings. The cumulative building uses and building designs would be developed pursuant to the City's *General Plan* and urban design controls and guidelines imposed by the Market and Octavia Neighborhood Plan for those project sites located within the plan area. These regulations would, in some measure, minimize the adverse visual impacts in the site vicinity.

Development throughout the vicinity would result in noticeable changes in visual quality associated with the construction of new buildings and an overall intensification of urban uses. The proposed project, which would develop an existing surface parking lot, would be considered infill development. Cumulative building in the area could define and unify the vicinity's visual context, in accordance with planning efforts like the Market-Octavia and Downtown plans. Although visual quality is subjective, it can reasonably be concluded that proposed building, itself, within anticipated cumulative development, would not result in a substantial, demonstrable negative aesthetic effect on the existing visual character

¹³ All cumulative residential developments listed on page 69, except the 1,900-unit Trinity project at 1177 Market Street, fall within Market-Octavia Final EIR boundaries.

III. ENVIRONMENTAL SETTING AND IMPACTS
B. AESTHETICS

or quality of the area and its surroundings. Therefore, cumulative visual impacts would be less than significant.

C. TRANSPORTATION

This section describes existing transportation conditions (roadway traffic, transit, parking, pedestrian, and bicycle conditions) near the project site, and summarizes the results of a transportation impact analysis prepared for a previously proposed, 16-story project¹⁴ and revisions of that analysis to reflect the currently proposed 14-story, 117-unit project.¹⁵

SETTING

Transportation Study Area

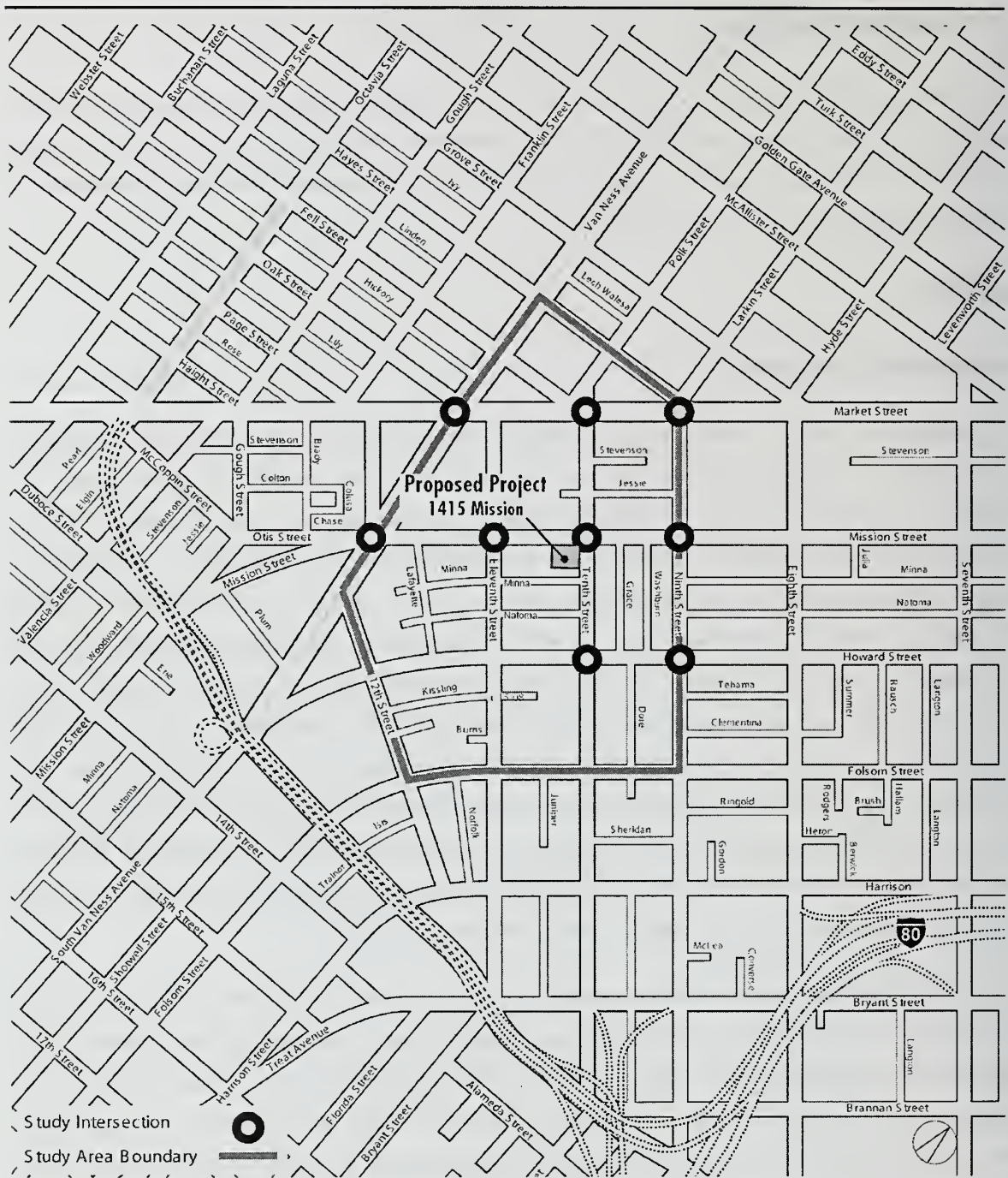
The transportation analysis established a transportation study area (study area) around the project site bound by Hayes, Ninth, Folsom, and Twelfth Streets, and Van Ness Avenue (see Figure 17, page 76). Three scenarios were analyzed: (1) Existing Conditions; (2) Existing Plus Project Conditions; and (3) Future Year 2020 Cumulative Conditions. For the Existing Plus Project scenario, vehicle-trips are estimated based on the trip generation rates and mode split data in the San Francisco Planning Department's 2002 Transportation Impact Analysis Guidelines for Environmental Review (2002 SF Guidelines) and from 2000 Census data for census tract 176.01 (for the residential uses). The trip distribution pattern for retail uses is based on data from the 2002 SF Guidelines for the C-3 district. The trip distribution for residential use is based on the 2000 Census data for census tract 176.01. Future Year 2020 scenario cumulative effects are based on growth rates consistent with the intersection analyses of the Mid-Market and South-of-Market Redevelopment Area Transportation Study (September 17, 2002), and the Tenth/Market/Mission Streets Mixed Use Project Transportation Study (March 16, 2004). Forecast growth was adjusted in light of the Market-Octavia EIR (May 31, 2005).

The analysis identifies nine intersections within the study area that the proposed project would most likely affect: the intersections of Market/Ninth, Market/ Tenth, Market/Van Ness, Mission/Ninth, Mission/Tenth, Mission/Eleventh, Mission/South Van Ness, Howard/Ninth, and Howard/Tenth Streets. Intersections are analyzed during the weekday p.m. peak hour. The p.m. peak hour was determined, based on traffic counts (collected between 4:00 p.m. to 6:00 p.m.), to be between 5:00 p.m. and 6:00 p.m.

¹⁴ CHS Consulting Group, *1415 Mission Street Project Transportation Study – Final Report*, May 25, 2007. This report is on file and available for public review by appointment at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, as part of the project file 2005.0540E.

¹⁵ Antonio Genoese, CHS Consulting Group, *Memorandum to: Daniel Frattin, Reuben & Junius, LLP, Re: 1415 Mission Street Project*, September 5, 2008. This letter is on file and available for public review by appointment at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, as part of the project file 2005.0540E.

III. ENVIRONMENTAL SETTING AND IMPACTS
C. TRANSPORTATION



Transportation Study Area Figure 17

New traffic counts were collected for Howard/Ninth Street, Howard/Tenth Street, and Howard/South Van Ness Avenue on March 30, 2006. Intersection volumes for the other intersections were obtained from the Tenth/Market/Mission Streets Mixed Use Project Transportation Study (March 16, 2004) and the 1177 Market Street Project Transportation Study (Final Report, January 24, 2006).

Roadway Network

REGIONAL FREEWAYS

Interstate 80 (I-80) and U.S. Highway 101 (U.S. 101) provide the primary regional access to the study area. U.S. 101 serves San Francisco and the Peninsula/South Bay, and extends north via Van Ness Avenue (U.S. 101 between Market and Lombard Streets) and the Golden Gate Bridge to the North Bay. I-80 connects San Francisco to the East Bay and points east via the San Francisco–Oakland Bay Bridge. The closest I-80 westbound off-ramps are at the Eighth/Harrison intersection and at Mission Street near Duboce Avenue, while access to I-80 eastbound is via on-ramps at the intersection of Eighth/Bryant Streets and at South Van Ness Avenue near Duboce Avenue. U.S. 101 and I-80 merge south of the project site. The closest access to and from U.S. 101 includes the on- and off-ramps near the intersections of Seventh/Harrison, Seventh/Bryant, Eighth/Harrison, Ninth/Bryant, Tenth/Bryant, and South Van Ness/Thirteenth Streets. A new U.S. 101 on-ramp at the intersection of Market/Octavia Streets opened in September 2005. Interstate 280 (I-280) provides regional access to southern San Francisco, the Peninsula, and the South Bay. I-280 has an interchange with U.S. 101 south of the study area. I-280 is a six-lane highway that splits and terminates at two locations: the intersections of Brannan/Sixth and King/Fifth Streets, both near the study area. The primary access route between I-280 and the study area is either via the Sixth Street on- and off- ramps at Brannan Street or via the US-101 freeway.

LOCAL STREETS¹⁶

Nearby east-west roadways serving the project site include Market, Mission, Howard, Fell, Hayes, and Folsom Streets. Market Street runs between the Embarcadero and Portola Drive in Twin Peaks. It has two travel lanes in each direction near the project site, and parking is generally not permitted. Mission Street runs east-west between The Embarcadero and South Van Ness Avenue, becoming a north-south direction roadway west of South Van Ness Avenue continuing to Caesar Chavez Street. Near the project site, Mission Street is a two-way arterial with two lanes in each direction; it has on-street metered parking on both sides of the street; parking is prohibited from 3:00-6:00 p.m. to increase roadway capacity during the

¹⁶ It should be noted that in the South of Market area, streets that run in the northwest/southeast direction, such as 10th and 11th Streets are generally considered north-south streets, whereas streets that run in the southwest/northeast direction, such as Mission, Market, and Howard Streets are generally considered east-west streets.

p.m. peak period. Howard Street runs between the Embarcadero and South Van Ness Avenue. It is a primary route from Downtown to the I-80 westbound on-ramp at Fourth and Harrison Streets. It is a two-way arterial with two travel lanes in each direction between the Embarcadero and Fremont Street, and it is a one-way, four-lane, westbound arterial west of Fremont Street. On-street parking is prohibited on both sides of the street along the north curb from 4:00-6:00 p.m. to increase roadway capacity during the p.m. peak hour period. Folsom Street runs between The Embarcadero and Ripley Street (Bernal Heights) and it is primarily a four-lane, eastbound, one-way arterial with on-street parking on both sides of the street in the study area.

North of Market Street, are two major east-west arterials serving the project site – Hayes and Fell Streets. Fell Street runs between Van Ness Avenue and Golden Gate Park. Fell Street forms a three-lane couplet with Oak Street and operates one-way in the westbound direction west of Gough Street. Hayes Street runs from the intersection of Market, Larkin, and Ninth Streets to Stanyan Street at the eastern boundary of Golden Gate Park. It is a one-way westbound street from Market to Gough Streets with three to five lanes of traffic, and then becomes a two-way street to Stanyan Street with one traffic lane in each direction. Parking is not permitted on either side of the street from 4:00 p.m. to 7:00 p.m. between Larkin and Franklin Streets, or on the south side between Franklin and Gough Streets.

Nearby north-south roadways serving the project site include Van Ness Avenue, Polk Street, and Eighth, Ninth, Tenth, Eleventh, and Twelfth Streets. Van Ness Avenue is the major north-south arterial in the central section of San Francisco. It is part of U.S. 101 between Lombard Street and the Central Freeway (via South Van Ness Avenue) and has three travel lanes in each direction near the project site. Polk Street is an arterial that runs between Beach and Market Streets, becoming Tenth Street south of Market Street. It operates in both directions north of Grove Street but one-way south of Grove Street with two southbound travel lanes near the project site.

Ninth Street is a major arterial running between Market and Division Streets, providing direct access to the Civic Center from U.S. 101 and I-80. It forms a one-way couplet with Tenth Street operating with four northbound travel lanes. There is a peak period tow-away zone (from 4:00 to 7:00 p.m.) on the east curb between Folsom and Howard and on both sides between Howard and Mission Streets. Tenth Street is a major arterial running from Market Street to Division Street. Near the project site, it is one-way southbound with five lanes providing access to southbound U.S. 101 via an on-ramp at Tenth and Bryant Streets. Eighth Street is a major arterial running between Market, Division, and Townsend Streets. It is one-way with four lanes southbound from Market to Bryant Streets. Eleventh Street extends from Market to Division Streets with one travel lane in each direction. Twelfth Street runs between Market and Harrison Streets as a two-way roadway near the project site.

Intersection Operations

The concept of levels of service (LOS) is a qualitative description of an intersection's performance based on the average delay per vehicle. Intersection levels of service range from LOS A, which indicates free flow or excellent conditions with short delays, to LOS F, which indicates very congested conditions with extremely long delays. In San Francisco, LOS A through LOS D are considered excellent to satisfactory service levels, LOS E is undesirable, and LOS F conditions are considered unacceptable.

Existing weekday p.m. peak hour intersection operating conditions at the nine study area intersections are presented in Table 2. During the weekday p.m. peak hour, all of the study intersections except the intersection of Mission Street and South Van Ness Avenue currently operate at an acceptable LOS of D or better. The intersection of Mission Street and South Van Ness Avenue currently operates at LOS E with a delay of 73.7 seconds. The poor operating condition at this intersection is primarily due to high trip volumes in the southbound through movement on Van Ness Avenue (providing access to northbound and southbound US 101).

Table 2
Intersection Level of Service
Existing (2006) Weekday PM Peak Hour

| Intersection | Actual Condition (without transit enforcement) | | With Transit Enforcement | |
|---------------------------------|---|-----|-----------------------------------|-----|
| | Delay ¹ (sec./veh.) | LOS | Delay ¹ (sec./veh.) | LOS |
| Market/9 th Street | 31.2 | C | 42.7 | D |
| Market/10 th Street | 20.6 | C | 24.2 | C |
| Market/Van Ness Ave | 33.9 | C | 37.2 | D |
| Mission/9 th Street | 22.0 | C | 44.9 | D |
| Mission/10 th Street | 27.0 | C | 61.4 | E |
| Mission/11 th Street | 21.9 | C | 23.9 | C |
| Mission/South Van Ness Ave | 73.7 | E | NA | NA |
| Howard/9 th Street | 17.0 | B | NA | NA |
| Howard/10 th Street | 20.4 | C | NA | NA |

Notes:

¹ Delay values are not measured in the field, but are estimated based on calculations of existing traffic volumes.

Source: CHS Consulting Group, 2006.

The intersections on both Market and Mission Streets were analyzed with and without enforcement of the existing bus-only lane. Observations showed that although the bus lanes on Market and Mission Streets are clearly striped and signed for buses only, some cars do use them as a normal travel lane. If the bus-only lane were fully enforced, the LOS and delays at intersections on Market and Mission Streets would be worse. The intersection of Mission at Tenth Street would be the most affected because both eastbound and westbound lanes have a bus-only designated lane. Because private vehicles also use the bus-only lanes during peak hours, the non-enforced analysis reflects the real condition.

Transit Network

There are many public transit lines serving the project site. Transit riders can use the local San Francisco Municipal (Muni) rail or bus lines to access regional transit operators (Figure 18 on page 81). The project site is located along the major Mission Street transit service corridor where Muni provides local service. It is within one block of the major Market Street transportation corridor where the local Muni and regional BART provide service. It is approximately two blocks from the Van Ness Avenue transit corridor. Bus stops are generally spaced one block apart in the South of Market area, although in the immediate project vicinity, stops are located on either side of the project block at the intersections of Mission/Eleventh and Mission/Ninth Streets. North of Market Street, stops are spaced approximately every other block. Figure 18, page 81, shows the transit lines in the study area and stops within a one-block radius of the project site.

Transit services to the East Bay include BART along Market Street, AC Transit buses from the Transbay Terminal, and ferries from the Ferry Building. Service to and from the North Bay is provided by Golden Gate Transit along Van Ness Avenue¹⁷ and at the Transbay Terminal, and by ferry service from the Ferry Building. Service to and from the Peninsula and South Bay is provided by Caltrain at its terminal located at Fourth and Townsend Streets and by the San Mateo County Transit District (SamTrans) at the Transbay Terminal. SamTrans does not provide local service in the project area.

The project site is approximately 0.35 miles south of the Civic Center BART station (accessed via a two-block walk), about two miles west of the Caltrain terminal (accessed via the 47-Van Ness), approximately 1.6 miles west of the Transbay Terminal (accessed via the 14-Mission), and approximately 1.8 miles from the Ferry Terminal (accessed via the 14-Mission). Muni operates fourteen bus lines and eight rail lines near the project site: the 6-Parnassus, 7-Haight, 9-San Bruno, 14-Mission, 14L-Mission Limited, 16AX-

¹⁷ It should be noted that only alightings are allowed from Golden Gate Transit buses destined to San Francisco from Marin and Sonoma counties. Conversely, only boardings are allowed onto Golden Gate Transit buses destined to Marin and Sonoma counties from San Francisco.



Source: During Associates

1 201103

MUNI and Regional Transportation and Stop Locations Figure 18

Noriega 'A' Express, 16BX-Noriega 'B' Express, 19-Polk, 21-Hayes, 26-Valencia, 47-Van Ness, 49-Van Ness-Mission, 71-Haight-Noriega, 71L-Haight-Noriega Limited, and all eight of the Muni rail lines (the F-Market, J-Church, K-Ingleside, L-Taraval, M-Ocean View, N-Judah, S-Castro-Embarcadero Shuttle, and the T-Third Street).

The screenline analysis for the project estimates transit volume to and from the greater downtown area by corridors within the larger screenline areas, and compares those volumes to available capacity within each corridor and screenline. The four screenlines are northeast, northwest, southeast, and southwest. Utilized capacity is a measure of the number of passengers compared to the design capacity of the vehicle, and is typically expressed as a percentage. Muni screenlines and sub-corridors that are at or near capacity operate under noticeably crowded conditions with many standees. Muni has adopted a service standard of 85 percent capacity utilization based on the maximum load. Some individual transit vehicles operate at or above capacity and are extremely crowded during the p.m. peak hour at their most heavily used points while others operate under less crowded conditions. The extent of crowding is accentuated whenever targeted headways are not met, because of missed runs or bunching in service, or both. Thus, transit operators may experience substantial problems in service delivery before utilization reaches maximum service capacity standards. Table 3, page 83, shows existing utilization in Muni screenlines. The average capacity utilization is 84 percent across all lines, and varies from a low of 55 percent on all lines in the northeast screenline (other than in the Kearny/Stockton Corridor), to a high of 91 percent on all lines in the southeast screenline (other than in the Third Street and the Mission corridors). The project site is located in the southeast corridor.

Capacity utilization of regional transit carriers (BART, AC Transit, SamTrans, Caltrain, and Golden Gate Transit) averages 72 percent across the three regional screenlines (East Bay, North Bay, and South Bay). The highest utilization is 120 percent (BART, East Bay Screenline) while the lowest utilization is 30 percent (BART, South Bay Screenline). BART has a performance standard of 135 percent, which means that all seats are full and the number of standees corresponds to 35 percent of the seating capacity. All other regional transit operators have a "load" factor standard of 1.0 (e.g., utilization standard), which means that all seats are full. All regional transit providers currently operate at less than their design capacity, which indicates that seats are generally available.

| Table 3 MUNI Screenline Analysis Existing PM Peak Hour Conditions | | | |
|--|---------------|-----------------------|-----------------------------------|
| Screenline | Ridership | Capacity ¹ | Capacity Utilization ² |
| Northeast Screenline | | | |
| Kearny/Stockton Corridor | 2,217 | 2,611 | 85% |
| All Other Lines | 946 | 1,706 | 55% |
| Subtotal | 3,163 | 4,317 | 73% |
| Northwest Screenline | | | |
| Geary Corridor | 2,509 | 2,942 | 85% |
| All Other Lines | 5,956 | 6,989 | 85% |
| Subtotal | 8,465 | 9,931 | 85% |
| Southeast Screenline | | | |
| Third Street Corridor | 424 | 595 | 71% |
| Mission Corridor | 1,168 | 1,325 | 88% |
| All Other Lines | 1,982 | 2,170 | 91% |
| Subtotal | 3,574 | 4,090 | 87% |
| Southwest Screenline | | | |
| Subway Lines | 5,259 | 5,891 | 89% |
| All Other Lines | 1,409 | 1,830 | 77% |
| Subtotal | 6,668 | 7,721 | 86% |
| TOTAL | 21,870 | 26,059 | 84% |

Notes:

¹ Capacity = design capacity x number of scheduled bus trips.

² Capacity Utilization = passenger demand / capacity. It should be noted that Muni uses a capacity utilization service standard of 1.0, which includes a substantial number of standees (between 30 to 80 percent) and that each screenline and most sub-corridors include more than one line. Therefore, there may be individual lines within a screenline that operate at or above 100 percent with extreme crowding even if the average capacity utilization for an entire screenline is less than 100 percent.

Source: San Francisco Planning Department, *Transportation Impact Analysis Guidelines for Environmental Review*, October 2002.

Parking Conditions

On-street parking is generally utilized at maximum capacity during the midday peak period (1:30-3:30 p.m.) and at approximately 30 percent of capacity (70 percent available) during the weekday evening period (6:30-8:00 p.m.). Peak parking demand by workers and patrons of local businesses occurs during

the midday peak period, and peak parking demand by residents occurs during the evening. There are eleven public off-street parking facilities in the study area with a total of 1,296 spaces. During the weekday midday peak period, off-street parking facilities in the study area operate at a 97 percent occupancy level, or effectively at capacity. When occupancy levels exceed 85 percent, drivers often need to circle the facility in order to find a parking space, even though there are spaces available. The study area recently lost 173 public off-street parking spaces from the development at 55 Ninth Street. Future development, such as at Fox Plaza, may further reduce parking supply in the area.

During the weekday evening period, several parking facilities are closed, reducing evening parking to 857 spaces compared to 1,296 spaces during the day. Throughout the study area, off-street parking facilities operate at a 35 percent occupancy during the weekday evening period, leaving an estimated 559 spaces available. However, weekday evening occupancy rates vary within the study area, with facilities south of Market Street operating at 19 percent occupancy during the weekday evening period and facilities north of Market Street operating at 45 percent occupancy during the same period.

PEDESTRIAN CONDITIONS

The transportation study evaluated existing pedestrian conditions qualitatively during field visits to the project site during the weekday p.m. peak hour. Adjacent to the project site, both Mission and Tenth Streets have wide sidewalks and high pedestrian capacity. Mission Street has 15-foot-wide sidewalks while those on Tenth Street are ten feet wide. The high concentration of commercial uses, Muni transit stops, and BART station on Market Street generate high pedestrian use compared to other streets in the area, but the wide sidewalks accommodate high pedestrian trip volume without becoming congested. Overall, the sidewalks and crosswalks appeared to be operating under satisfactory conditions, with pedestrians moving at normal walking speeds and with freedom to bypass other pedestrians.

BICYCLE CONDITIONS

Field observations within the study area (see Figure 19, page 86) during the weekday p.m. peak hour indicated that bicycle volumes in the area are relatively low to moderate compared to pedestrian and vehicular traffic. However, Market Street is a popular bike route, including for bike messengers, so bicycle traffic is heavier on Market than the other study area streets. In stretches where lanes are narrow, cyclists and buses must maneuver around each other. Other conflicts exist between vehicles and bicycles in the study area, as in other areas of the City, especially when double parking blocks existing bicycle lanes.

There are five bicycle routes within the study area, as shown in Figure 19, page 86:

- Route 20 (Civic Center-USF-Richmond) connects the Civic Center with the University of San Francisco and the Richmond District.
- Route 23 (Potrero Hill-SoMa) connects northeastern Potrero Hill with South of Market and Market Street via Seventh and Eighth Streets near the project site.
- Route 25 (Visitation Valley-Civic Center-Aquatic Park) connects the Visitation Valley/Bayview Hunters Point area with Potrero Hill, Civic Center, Nob Hill, Russian Hill, and Aquatic Park. Within the study area, it runs down Polk and Tenth Streets to Howard Street.
- Route 30 (Downtown-Golden Gate Park) connects Downtown with Golden Gate Park. In the study area, it runs down Folsom Street to The Embarcadero and along Howard Street from The Embarcadero to Eleventh and Mission Streets.
- Route 50 (Downtown-Sunset) connects the Downtown with the southern Sunset District. It runs on Sloat Boulevard from the Great Highway to Portola Boulevard, passes through Twin Peaks, traverses Market Street, and terminates at The Embarcadero. There are dedicated bike lanes on Market Street from Castro Eighth Streets. East of Eighth Street bicyclists share the roadway with buses and other vehicles.

IMPACTS

Significance Criteria

The following are the significance criteria used by the Planning Department for the determination of transportation and circulation impacts associated with a proposed project.

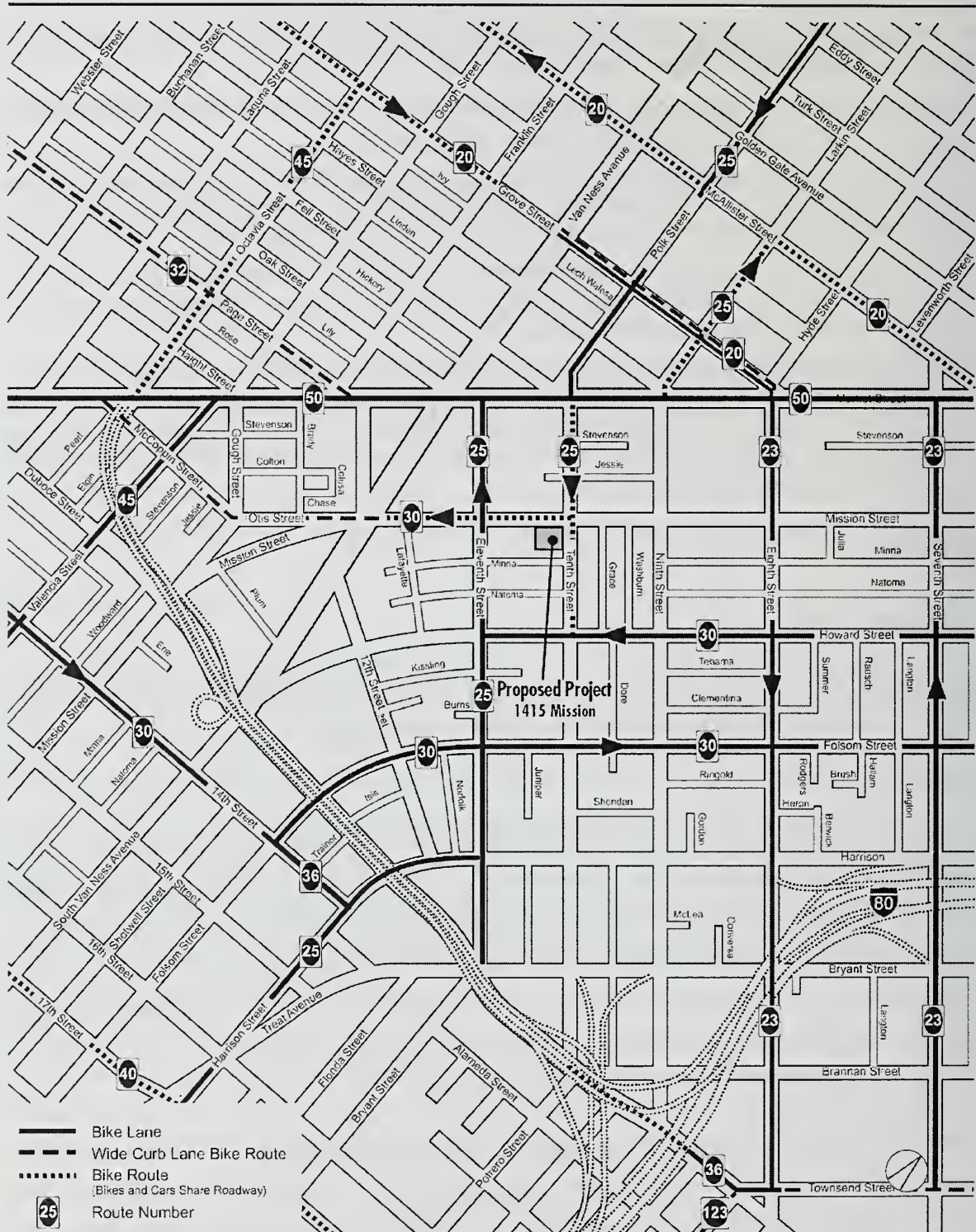
INTERSECTIONS

The operational impact on signalized intersections is considered significant when project-related traffic causes the intersection level of service to deteriorate from LOS D or better to LOS E or LOS F, or from LOS E to LOS F. The operational impacts on unsignalized intersections are generally considered significant under either of two conditions: (1) project-related traffic would cause the level of service at the worst approach to deteriorate from LOS D or better to LOS E or LOS F and Caltrans traffic signal warrants would be met¹⁸; or (2) project-related traffic would cause Caltrans signal warrants to be met when the worst approach is already operating at LOS E or LOS F.

A project may result in significant adverse impacts at intersections that operate at LOS E or LOS F under existing conditions depending upon the magnitude of the project's contribution to increasing average delay per vehicle. In addition, a project would have a significant adverse impact if it would cause major

¹⁸ Caltrans Traffic Signal Warrants serve as a first step in evaluating unsignalized intersections for potential signalization. There are eight Caltrans traffic signal warrants, with minimum thresholds varying, depending upon roadway geometry, approach speeds, traffic volumes, proximity of other traffic controls, etc. The transportation analysis uses Traffic Signal Warrant 3—Peak Hour Volume—to assess the need for signalization.

III. ENVIRONMENTAL SETTING AND IMPACTS
C. TRANSPORTATION



Source: Durning Associates

1-27-99

Bicycle Lanes and Routes in the Project Area Figure 19

traffic hazards or contribute considerably to cumulative traffic increases that would cause deterioration in levels of service to unacceptable levels.

TRANSIT

A project would have a significant effect on the environment if it would cause a substantial increase in transit demand that could not be accommodated by existing transit service, resulting in unacceptable levels of transit service; or cause a substantial increase in delays or operating costs so that significant adverse impacts in transit service levels could result. With the Muni and regional transit screenline analyses, a project would have a significant effect on the transit provider if project-related transit trips would cause the capacity utilization standard to be exceeded during the p.m. peak hour.

PARKING

The Planning Department uses several criteria for deciding whether a proposed project may require a transportation study as part of its environmental review. For example, one criterion is if a proposed project's parking supply is 20 percent less than either the *Planning Code's* requirements or the anticipated demand.¹⁹ As noted above, a transportation study was completed for the proposed project.

San Francisco generally does not consider parking supply as part of the permanent physical environment. Parking conditions are not static, as parking supply and demand varies from day to day, from day to night, from month to month, etc. Hence, the availability of parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people change their modes and patterns of travel.

Parking deficits are considered to be social effects, rather than impacts on the physical environment as defined by CEQA. Under CEQA, a project's social impacts need not be treated as significant impacts on the environment. Environmental documents should, however, address the secondary physical impacts that could be triggered by a social impact (CEQA Guidelines Section 15131(a)). The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. In the experience of San Francisco transportation planners, however, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles, or travel by foot) and a relatively dense pattern of urban development, induces many drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits. Any such resulting

¹⁹ San Francisco Planning Department, Environmental Evaluation Application, Environmental Issues "c," p. 3, and the Department's *Transportation Impact Analysis Guidelines*, October 2002.

shifts to transit service, in particular, would be in keeping with the City's "Transit First" policy. The City's Transit First Policy, established in the City's Charter Section 16.102, provides that "parking policies for areas well served by public transit shall be designed to encourage travel by public transportation and alternative transportation."

The transportation analysis accounts for potential secondary effects, such as cars circling and looking for parking by assuming that all drivers would attempt to find parking at or near the project site and then seek parking farther away if convenient parking is unavailable. Moreover, the secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts that may result from a shortfall in parking in the vicinity of the proposed project would be minor, and the traffic assignments used in the transportation analysis, as well as in the associated air quality, noise, and pedestrian safety analyses, reasonably address potential secondary effects.

PEDESTRIANS

The project would have a significant effect on the environment if it would result in substantial overcrowding on public sidewalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas.

BICYCLES

The project would have a significant effect on the environment if it would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.

LOADING

A project would have a significant effect on the environment if it would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and would create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles, or pedestrians.

CONSTRUCTION

Construction-related transportation impacts generally would not be considered significant due to their temporary and limited duration.

Project Travel Demand

The travel demand, parking demand, and freight/service loading demand estimates were based on the methodology and assumptions developed by the Planning Department and published in the *Transportation Impact Analysis Guidelines for Environmental Review*, October 2002 (*SF Guidelines*).

To estimate the number of new person-trips that would be generated by the proposed project, residential trip generation rates were applied to the type and number of proposed residential units, and building management office and retail trip generation rates were applied to those uses. Person-trips were calculated on a weekday daily and p.m. peak-hour basis. These person-trips were distributed to eight geographical areas, including the four quadrants of San Francisco, the East Bay, the North Bay, the South Bay, and outside the area, and were assigned to the various available travel modes (including auto, transit, walk, and other modes). Both the distribution and the choice of travel mode (mode split) of the trips were based on U.S. Census data for census tract 176.01, in which the project is located. The number of vehicle-trips generated by the proposed project was determined from the auto person-trips and average vehicle occupancy, as obtained from the U.S. Census data.

The proposed project would generate approximately 1,350 new person-trips on a weekday daily basis, and 205 new person-trips during the p.m. peak hour. Of the 205 p.m. peak hour person-trips, 27 trips would be by auto (13 percent), 70 trips would be by transit (35 percent), 16 would be by carpool (8 percent), and 92 trips would be by walking and other modes (45 percent). About 30 new vehicle-trips would be generated by the proposed project during the weekday p.m. peak hour, of which about 19 (64 percent) would be inbound to the project site and 11 (36 percent) would be outbound from the project site. Since the proposed project would be a predominantly residential building, most of the transit trips during the p.m. peak hour would be inbound to the site (i.e., returning home from work). Overall, approximately 95 percent of the trips generated by the residential uses would be made within San Francisco, with the rest made to and from the East Bay, South Bay, and North Bay. Of the work trips generated by the non-residential uses, about 62 percent would be made within San Francisco, with about 23 percent made to and from the East Bay, three percent to and from the North Bay, and about 11 percent to and from the South Bay.²⁰

The proposed project would generate an estimated total parking demand of about 158 spaces (153 long-term and 5 short-term), with 150 spaces associated with residential uses and the remaining eight spaces with office and retail uses.

²⁰ CHS Consulting, op cit, p. 31 Table 10. Percentages are rounded. An additional one percent of the trips were to an unspecified "other" destination.

The proposed project would generate fewer than five daily truck trips, which equals a peak hour loading demand (10:00 a.m.-1:00 p.m.) of less than one space and an average hour loading demand (8:00 a.m.-5:00 p.m.) that is also less than one space, of which most would be associated with residential use.

Traffic Impacts

EXISTING PLUS PROJECT CONDITIONS

The project trips were added to the existing traffic study area roadways using the “TRAFFIX” computer software in accordance with the trip distribution patterns described in the preceding section. Since the proposed project would be a predominantly residential building, most of the trips during the p.m. peak hour would be inbound to the site (i.e., returning home from work).

As shown on Table 4 page 91, under the existing-plus-project conditions all of the study intersections that currently operate at LOS D or better are expected to continue operating at LOS D or better with the addition of project-generated traffic, causing no substantial increase in delays.²¹ The intersection of Mission/South Van Ness would continue to operate at an unacceptable LOS E, with no significant increase in delay. Because all study intersections except Mission/South Van Ness would continue to operate at the same acceptable service levels as under existing conditions (LOS D or better), and because the project traffic would not make a substantial contribution to the existing LOS E condition at the intersection of Mission/South Van Ness, the proposed project would not result in significant traffic impacts.

2020 CUMULATIVE CONDITIONS

Table 4 presents the weekday p.m. peak hour intersection operating conditions that would result from the increased traffic volumes under 2020 Cumulative conditions. Seven of the study intersections that would operate at LOS D or better under 2020 cumulative conditions are expected to continue operating at LOS D or better with no significant changes to the delays at those intersections. Under 2020 cumulative conditions, the intersections of Mission/South Van Ness and Market/Van Ness would deteriorate from LOS E to LOS F and LOS C/D to LOS E/E respectively. Future traffic growth under cumulative conditions would be less than a doubling of existing traffic levels.²² Thus, there would not be a noticeable increase in traffic noise. The previously proposed 16-story project’s share of future traffic growth at these intersections would be 0.1 percent at Market/Van Ness and 0.4 percent at Mission/South Van Ness, less

²¹ The existing-plus-project conditions in Table 4 were calculated for the previously proposed 16-story project; impacts of the currently proposed project would be less.

²² CHS Consulting Group, op cit.

Table 4
Intersection Level of Service
Existing (2006), Existing Plus Project, and Future Cumulative (2020)
Weekday P.M. Peak Hour

| Intersection | Existing (2006) | | Existing + Project ¹ | | Future (2020) ¹ | |
|---|-----------------|----------------|---------------------------------|-----|----------------------------|-----|
| | Delay | LOS | Delay | LOS | Delay | LOS |
| Market Street/9 th Street ² | 31.2/42.7 | C/D | 31.3/42.7 | C/D | 28.3/37.8 ³ | C/D |
| Market Street/10 th Street ² | 20.6/24.2 | C/C | 20.7/24.2 | C/C | 21.8/27.2 | C/C |
| Market Street/Van Ness Ave ² | 33.9/37.2 | C/D | 33.9/37.2 | C/D | 59.8/64.3 | E/E |
| Mission/9 th Street ² | 22.0/44.9 | C/D | 22.1/45.0 | C/D | 42.0/91.3 | D/F |
| Mission Street/10 th Street ² | 27.0/61.4 | C/E | 27.1/61.2 | C/E | 45.1/90.9 | D/F |
| Mission Street/11 th Street ² | 21.9/23.9 | C/C | 22.4/24.3 | C/C | 29.1/40.0 | C/D |
| Mission Street/ South Van Ness Avenue | 73.7 | E | 73.6 ⁴ | E | 84.8 | F |
| Howard/9 th Street | 20.4 | B ⁵ | 20.5 | C | 23.8 | C |
| Howard/10 th Street | 17 | B | 17 | B | 19.0 | B |

Notes:

¹ Existing Plus Project and Future (2020) LOS and delay in this table are for the previously proposed 16-story project. For the proposed project, the increase in delay under Existing Plus Project and Future (2020) conditions would be less than shown in this table, while the LOS would be the same as shown in this table.

² With the LOS notation "XX/YY," "XX" indicates LOS conditions under typical operating conditions and "YY" indicates LOS with full compliance of the bus only lane.

³ Reduction based on the opening of the Market/Octavia Boulevard.

⁴ The "delay per vehicle" measure of intersection performance is a weighted average of total intersection delay to total volume. If the increase in total intersection delay created by a proposed project is relatively small when compared to a proposed project's total volume, then the average delay per vehicle will appear to decrease at that intersection. However, in this case, such a small change in delay per vehicle is better interpreted as no change in intersection operating conditions.

than one percent; the currently proposed project's contribution would be smaller. For traffic movements that determine overall LOS performance at these intersections, the project would generally add traffic to movements which would continue to operate satisfactorily. The project would add some vehicles to one movement at each intersection, which would operate poorly for 2020 cumulative conditions. The previously proposed 16-story project's contributions in each instance would be less than one percent. The contribution of the currently proposed 14-story project would be less than that of the 16-story project described above.²³ Therefore, project traffic would not represent a considerable contribution to 2020 cumulative traffic conditions and the project would not have a significant cumulative traffic impact.

²³ Antonio Genoese, CHS Consulting Group, 1415 Memorandum to: Daniel Frattin, Reuben & Junius, LLP, Re: 1415 Mission Street Project, September 5, 2008. This report is on file and available for public review by appointment at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, as part of the project file 2005.0540E.

Transit Impacts

EXISTING PLUS PROJECT CONDITIONS

Since the proposed project would be a predominantly residential building, most of the transit trips during the p.m. peak hour would be inbound to the site (i.e., returning home from work). The 70 transit trips generated by the residential uses during the p.m. peak hour would utilize the nearby Muni lines and transfer to other Muni bus and light rail lines, or to regional transit providers including Caltrain, SamTrans, AC Transit, Golden Gate Transit, and BART. Tables 5 and 6 summarize the screenline analysis for Muni and regional transit providers and are based on the previously proposed 16-story project, and impacts of the currently proposed project would be less.

Of the 70 estimated transit trips, 63 trips would occur within San Francisco, three would be regional, and four would be "other." Based on the location of the project site and the origins and destinations of the residents and visitors of the proposed project, transit trips were assigned to the screenlines discussed previously. Only 48 of the 63 San Francisco Muni trips are relevant to the transit impact analysis and were assigned to the screenlines. This is because some of the unassigned trips are inbound trips from areas that have ample Muni capacity and some internal trips are within Superdistrict 1 (not crossing any screenline). The proposed project's 63 transit trips within San Francisco would not substantially affect Muni's capacity utilization even though three of the four screenlines are at or already exceed Muni's capacity utilization standards (85 percent). The largest increase in ridership and capacity utilization due to the project would be less than one percent in the Southwest screenline. The total contribution to all the screenlines would also be less than one percent. This worst-case estimate in the p.m. peak hour would not be a considerable increase in capacity utilization and would not be considered a significant impact on Muni operations. Of the proposed project's five regional trips, only one new trip would be added to the East Bay screenline during the p.m. peak hour. There is available capacity to accommodate the proposed project's additional regional transit trips, and the impact on regional transit capacity would be less than significant.

In summary, the transit trips generated by the proposed project, and vehicle trips accessing the project site would not substantially affect, and thus would not have a significant project-specific impact on, transit operations.

Table 5
MUNI Screenline Analysis
Existing Plus Proposed Project, P.M. Peak Hour Conditions

| Screenline | Existing Ridership | Project Trips | Existing Plus Project Ridership | Existing Capacity | Percent Capacity | Percent Capacity with Project | Percent Project Contribution |
|-----------------------------|-----------------------|------------------|---------------------------------------|----------------------|---------------------|--|------------------------------------|
| Northeast Screenline | | | | | | | |
| Kearny/Stockton Corridor | 2,217 | 5 | 2,222 | 2,611 | 85% | 85% | <1% |
| All Other Lines | 946 | 2 | 948 | 1,706 | 55% | 56% | <1% |
| Subtotal | 3,163 | 7 | 3,170 | 4,317 | 73% | 73% | <1% |
| Northwest Screenline | | | | | | | |
| Geary Corridor | 2,509 | 1 | 2,510 | 2,942 | 85% | 85% | <1% |
| All Other Lines | 5,956 | 1 | 5,957 | 6,989 | 85% | 85% | <1% |
| Subtotal | 8,465 | 2 | 8,467 | 9,931 | 85% | 85% | <1% |
| Southeast Screenline | | | | | | | |
| Third Street Corridor | 424 | 0 | 424 | 595 | 71% | 71% | <1% |
| Mission Corridor | 1,168 | 1 | 1,169 | 1,325 | 88% | 88% | <1% |
| All Other Lines | 1,982 | 1 | 1,983 | 2,170 | 91% | 91% | <1% |
| Subtotal | 3,574 | 2 | 3,576 | 4,090 | 87% | 87% | <1% |
| Southwest Screenline | | | | | | | |
| Subway Lines | 5,259 | 33 | 5,292 | 5,891 | 89% | 90% | <1% |
| All Other Lines | 1,409 | 13 | 1,418 | 1,830 | 77% | 77% | <1% |
| Subtotal | 6,668 | 46 | 6,714 | 7,721 | 86% | 87% | <1% |
| TOTAL | 21,870 | 57 | 21,927 | 26,059 | 84% | 84% | <1% |

Note:

Existing Plus Project ridership and project contributions in this table are for the previously proposed 16-story project. For the proposed project, the increase in ridership and project contributions under Existing Plus Project conditions would be less than shown in this table.

Totals may not add due to rounding.

Sources: CHS Consulting Group, 2006, and San Francisco Planning Department, *Transportation Impact Analysis Guidelines for Environmental Review*, October 2002

| Table 6 Regional Provider Screenline Analysis Existing Plus Proposed Project, PM Peak Hour | | | | | |
|---|------------------|--------------------------|--|-----------------------------|-----------------------------|
| Transit Provider | Ridership | Project Ridership | Existing Plus Project Ridership | Capacity¹ | Capacity Utilization |
| East Bay | | | | | |
| BART | 17,537 | 1 | 17,538 | 14,560 | 120% |
| AC Transit | 3,143 | 0 | 3,143 | 4,896 | 64% |
| Ferry | 646 | 0 | 646 | 1,629 | 40% |
| Subtotal | 21,326 | 1 | 21,327 | 21,085 | 101% |
| North Bay | | | | | |
| GGT buses | 3,132 | 1 | 3,133 | 5,339 | 59% |
| GGT ferries | 755 | 0 | 755 | 2,410 | 31% |
| Subtotal | 3,887 | 1 | 3,888 | 7,749 | 50% |
| South Bay | | | | | |
| BART | 3,157 | 1 | 3,158 | 10,360 | 30% |
| Caltrain | 1,900 | 0 | 1,900 | 2,900 | 66% |
| SamTrans | 785 | 0 | 785 | 1,083 | 72% |
| Subtotal | 5,842 | 1 | 5,843 | 14,343 | 41% |
| TOTAL ² | 31,054 | 3 | 31,058 | 43,177 | 72% |

Notes:

- Existing Plus Project ridership and project contributions in this table are for the previously proposed 16-story project. For the proposed project, the increase in ridership and project contributions under Existing Plus Project conditions would be less than shown in this table.
- Capacity based on the number of seats per transit vehicle.
- Totals may not add up exactly, due to rounding.

Sources: CHS Consulting Group, 2006. San Francisco Planning Department, and *Transportation Impact Analysis Guidelines for Environmental Review*, October 2002

2020 CUMULATIVE CONDITIONS

The screenline analysis of future cumulative transit conditions shows that between existing and 2020 cumulative conditions, transit ridership demand for the four Muni screenlines is projected to increase 19 percent and capacity is projected to increase 14 percent. Under these conditions, future ridership would exceed Muni's capacity utilization standard of 85 percent for the Northwest (86 percent), Southeast (98 percent), and Southwest (94 percent) screenlines. However, the proposed project's contribution to future demand would be negligible. Across all screenlines, the previously proposed project's contribution

would be less than 0.1 percent of future demand—it would be 0.02, 0.03, and 0.01 percent of future demand in the Northwest, Southeast, and Southwest screenlines, respectively. The contribution of the currently proposed project would be less. Because the contribution to cumulative transit capacity utilization would be negligible, the proposed project would have a less-than-significant cumulative transit impact in San Francisco. If Muni's plans for additional transit system capacity improvements are implemented, future ridership conditions would improve.

Under future cumulative conditions, all regional transit carriers would operate with sufficient capacity to accommodate demand and the cumulative regional transit ridership impact would be less than significant. The previously proposed project would contribute less than 0.01 percent to future demand, a negligible amount. The contribution of the currently proposed project would be less. BART would operate at very high occupancy rates to the East Bay (129 percent compared to its 135 percent performance standard) and there would be a 456 percent increase in ridership to the South Bay, with a 139 percent occupancy rate (exceeding the 135 percent performance standard). As a result, BART may be crowded enough in the p.m. peak hour in the outbound direction to the South Bay to cause some passengers to seek alternative transit modes. In addition, BART could lengthen trains to the South Bay to meet the increase in ridership.

Parking Impacts

EXISTING PLUS PROJECT CONDITIONS

Under the current C-M zoning, the *Planning Code* requires one parking space for each of the 117 proposed residential units and no parking for the 2,742 sq.ft. of ground-floor commercial space (Section 151), for a total of 117 required spaces. However, as discussed in Chapter II, Project Description, the proposed project would not be permitted under the C-M zoning. As a result, the project sponsor would propose rezoning the project site from C-M to C-3-G. Under C-3-G zoning, the *Planning Code* would not require the proposed project to provide off-street parking spaces, and would allow the project to provide a maximum of 116 spaces (101 residential and 15 commercial) with Planning Commission approval under *Planning Code* Section 309.²⁴ The project would provide up to 15 commercial spaces and 46 independently accessible or 101 valet spaces for the residential component, with two of the spaces available for persons

²⁴ For dwelling units in a C-3 district, *Planning Code* Section 151.1 allows up to 0.25 parking spaces for each unit. Up to 0.75 parking spaces for each unit with less than 2-bedroom or 1,000 sq.ft. of occupied space, and up to one space for each unit with at least 2-bedroom and 1,000 sq.ft., are allowed subject to the criteria and procedures of Section 151.1(e), which require Planning Commission approval under *Planning Code* Section 309. The proposed 65 studio/1-bedroom units would be allowed up to 49 parking spaces. There are 52 two-bedroom units proposed, all larger than 1,000 sq.ft., for which the *Planning Code* would allow 52 more spaces. The *Planning Code* permits use up to seven percent of the floor space or 15 spaces, whichever is greater, for retail and office use. Under the *Planning Code*, the proposed project would be permitted a total of 116 spaces (49 + 52 residential + 15 retail).

with disabilities. The proposed project would meet *Planning Code* requirements for bicycle storage and car share space by providing 42 bicycle spaces and one car-share space (either at an offsite location within 800 feet of the project site, or within the parking garage).

The proposed project would eliminate the existing 20 spaces of surface parking and construct a three-level underground garage with 46 independent self-park spaces or 101 valet-parked spaces, and 15 retail parking spaces. The proposed project's new residential uses would generate a demand for about 150 spaces, while its office/retail use would generate a demand for eight spaces. The total parking demand of 158 spaces would exceed the capacity of the proposed 116-space garage by 42 spaces (and would exceed the proposed garage's self-park capacity of 61 cars (46 residential and 15 commercial) by 97 spaces). The shortfall could not be accommodated presently during the daytime in public parking facilities within the study area because they operate close to capacity (97 percent). Some of it may be accommodated overnight within the study area either on street since parking meters are not time-limited typically between the hours of 6:00 p.m. to 9:00 a.m.; or in some of the off-street public parking facilities whose hours of operation meet the needs of parkers and since the facilities now operate at about 35 percent occupancy in the evening with approximately 559 spaces available. Some of the demand shortfall could also be met in off-street public parking facilities outside the study area and further away from the project site. It is also possible that the proposed project's actual demand for parking could be lower than estimated, or decrease over time, due to its close proximity to many public transit options (BART; Muni buses, streetcars, and light rail; SamTrans; and Golden Gate Transit), and the availability of car share programs, which may lead some residents to give up car ownership.

The project site is located on Mission Street (designated as a Transit Preferential Street in the *San Francisco General Plan*) and within two blocks of the transit rich Market Street corridor with eight Muni subway lines, BART, 15 Muni bus/trolley lines, and regional transit lines. The area's shops and services could meet some needs of residents as pedestrians. With the parking shortage for residential uses persisting for the foreseeable future as well as the immediate shortage for retail uses (assuming some new short-term parking is constructed in the near future), the availability of easily accessible transit service in the area would likely influence some residents of the proposed project and retail patrons to shift from auto use to transit. In addition, the project would provide a car share parking space, and car share programs are available off-site. This could reduce auto ownership and thus reduce the parking shortage relative to demand. Finally, some of the parking shortfall may be accommodated on-street since the nearby metered on-street parking spaces are not time-limited during the overnight hours.

The City of San Francisco does not consider parking deficits significant physical environmental impacts under CEQA, as discussed above under the section on Significance Criteria, page 85. The availability of

parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people—in response to parking scarcity—change their modes and patterns of travel. In addition, the proposed project would meet the policy intent of the *Planning Code's* off-street parking requirements (Section 150(a)) to provide enough parking for consistency with the General Plan, support a balanced transportation system using both private vehicles and transit, discourage excessive amounts of parking and their associated adverse effects, and encourage public transit use as an alternative to travel by private automobile. For these reasons, the proposed project would not result in a significant parking impact.

2020 CUMULATIVE CONDITIONS

Chapter III.A, Land Use and Zoning, page 53, and Figure 10, page 54, identify other residential projects approved, under construction, and under review near the project site. Of these cumulative development projects, there is one recently construction project, there are four projects under construction, three approved, and one under review. Together they would add approximately 3,745 units around the project site, and with the proposed project, there would be 3,862 new units. These projects will eliminate some existing parking, add off-street parking in conformance with the *Planning Code*, increase the demand for parking, and likely create parking deficits relative to demand as the proposed project would. Residents of these cumulative development projects would face similar parking deficits and options as those of the proposed project. Because the City of San Francisco does not consider parking deficits significant physical environmental impacts under CEQA and the *Planning Code's* requirements for off-street parking meet the policy intent of the *General Plan*, particularly for residential development in a transit-rich area, the cumulative parking impact would be less than significant.

Pedestrian Impacts

During the weekday p.m. peak hour, the proposed project would generate a total of 139 new pedestrian trips (70 transit and 69 walking). Pedestrian trips would be expected primarily to use Mission Street because that is the location of the main pedestrian building access and because access to transit is available on Mission Street. Due to the easy availability of transit services in the study area, transit-related pedestrian trips due to the project would likely occur at bus stops within a block or two of the project site on Market and Mission Streets. The wide sidewalks on these streets would be able to accommodate the additional pedestrian trips without causing significant circulation impacts along sidewalks and crosswalks. The proposed project's increase in eastbound right-turn traffic at the Mission/Tenth Streets intersection could increase the potential for vehicle/pedestrian conflicts at this intersection. The increase in potential pedestrian conflicts would not be substantial and the intersection is signalized. The sidewalks

could accommodate the increased pedestrian trip volume, the proposed project's pedestrian circulation impacts would be less than significant.

Bicycle Impacts

The project site is within convenient bicycling distance of office and retail buildings in the Civic Center area and downtown San Francisco. As such, it is anticipated that a portion of the 92 "walk/other" trips generated by the proposed project during the p.m. peak hour would be bicycle trips. As noted previously, there are five bicycle routes near the project site, including along Mission and Tenth Streets: Route 20 (Civic Center-USF-Richmond), Route 23 (Potrero Hill-SoMa), Route 25 (Visitacion Valley-Civic Center-Aquatic Park), Route 30 (Downtown-Golden Gate Park), and Route 50 (Downtown-Sunset). Some increase in peak-period bicycle use from the proposed project may be anticipated because of the project's proposed 42 bicycle spaces and proximity to bicycle routes and commute destinations, especially if the City implements plans over the next few years to establish dedicated bicycle lanes between Octavia Boulevard and Van Ness Avenue, install shared-lane markings on Market Street between Eighth Street and Justin Herman Plaza, and increase police enforcement along Market Street.²⁵ The proposed project's increase in bicycle trips would not be substantial and bicyclists would use existing bike lanes and routes in the study area. Bicyclists using Routes 25 and 30 traveling southbound on Tenth Street would continue to share the road with motorists (see Figure 19, page 86). The proposed project's increase in eastbound right-turn traffic at the Mission Street/Tenth Street intersection would increase the potential for vehicle/bicyclist conflicts at this location, but not to a substantial degree. The proposed project would result in an increase in the number of vehicles in the vicinity of the project site and thereby increase the potential for vehicle and bicycle conflicts. However, this increase would not be substantial enough to affect bicycle travel in the area, and would not result in a significant bicycle impact.

Loading Impacts

Since the proposed project would provide more than 100,000 gross square feet of residential uses, the *Planning Code* requires one off-street loading space. The proposed project would provide one off-street loading space on Tenth Street that would meet the design requirements of the *Planning Code* Section 154.b.2 (ten feet wide, 25 feet deep, and 12 feet high). The previously proposed 16-story project would generate a total of about five daily truck trips, which equals a demand of less than one peak-hour loading space and less than one average-hour loading space. The currently proposed 14-story project would generate fewer truck trips. Occasionally residents may use a large semi tractor-trailer during move-in or move-out. These vehicles could not be accommodated in the loading space and would have to use Tenth

²⁵ San Francisco Transportation Authority, *Market Street Study Action Plan*, February 2004.

Street. Residents would be required to apply for a permit from the Police Department to reserve metered spaces along Tenth Street. This kind of activity could be restricted to weekends only by the Police Department in order to avoid conflicts with vehicular and pedestrian traffic in the area. Trash/recycling pickup containers would be located in the service area on the ground floor (see Figure 2, page 33) and moved to the Tenth Street loading stall for pick up, therefore garbage collection is not anticipated to result in loading conflicts. For these reasons, the proposed project would not result in a significant loading impact.

Construction Impacts

It is anticipated that construction of the proposed project would take approximately 24 months. Construction-related activities would typically occur Monday through Friday from 7:00 a.m. to 5:00 p.m. Some construction activities may occur on weekends, depending on the construction phase.

Construction staging may occur on-site, and on adjacent sidewalks and streets. One lane along the length of the site on both Mission and Tenth Streets would be required during construction of the project. Barriers and bridges would be constructed over the sidewalks, extending 102 feet along Tenth Street and 113 feet along Mission Street. Street space would be occupied on Tenth Street for a crane. Temporary sidewalk or travel lane closures would be coordinated with the City in order to minimize the impacts on local traffic. In general, lane and sidewalk closures are subject to review and approval by DPW and SFMTA.

Throughout the construction period, there would be a flow of construction-related trucks to and from the site. Construction truck traffic would temporarily lessen the capacities of local streets due to the slower movement and larger turning radii of trucks, which may affect traffic operations.

During construction of the project, there would be about 15-80 construction workers per day at the project site, with the greatest number (50-80) present during the building framing and interior phases. The trip distribution and mode split of construction workers are not known. However, it is anticipated that the addition of the worker-related vehicle- or transit-trips would not substantially affect transportation conditions, because any impacts on local intersections or the transit network would be similar to, or less than, those associated with the proposed project. Construction workers who drive to the site would cause a temporary parking demand and would have to either park on-street or in parking facilities inside or outside the study area.

Prior to construction, the project coordinator would coordinate with Muni's Street Operations and Special Events Office to coordinate construction activities and reduce any impacts to transit operations.

The proposed project would not result in a significant construction traffic impact. Chapter IV of this Draft EIR identifies improvement measures that would further reduce the less-than-significant construction impacts and that the project sponsor has agreed to implement.²⁶

In summary, the proposed project would not result in a significant adverse project-related cumulative impact on traffic, transit, parking, pedestrian, bicycle, or loading conditions.

²⁶ R & K Investments. Letter to Carol Roos, Planner, San Francisco Planning Department, Major Environmental Analysis, February 18, 2009.

D. NOISE

The Initial Study (see Appendix A) found that the interior noise, building equipment noise, and construction noise impacts of the previously proposed 16-story project, that is, noise compatibility, operational noise, and construction noise, would be considered less than significant. Therefore, the interior noise, building equipment noise, and construction noise impacts of the currently proposed 14-story project also would be less than significant. The Initial Study determined that the EIR would analyze project-specific noise impacts related to traffic noise, and that cumulative traffic noise impacts could be potentially significant. Since publication of the Initial Study, the Department of Public Health has issued new guidelines governing development in San Francisco. Therefore, this section discusses the potential interior noise impacts and operational noise impacts of the proposed project as well as noise impacts related to project-generated traffic.

SETTING

The nearest sensitive receptors to the project site would be nearby residents, including tenants of the building immediately south of the project site (122 Tenth Street), future residents of the approved affordable housing project under construction at the northwest corner of Tenth and Mission Streets on the opposite side of Mission Street from the project, tenants of 154 Tenth Street and 1328 Mission Street (both approximately one-half block from the project site), tenants of 98 Ninth Street (approximately one block from the project site), tenants of 920, 940, 955, 956-958, 959, 960, 965, and 967 Natoma Street (approximately one block from the project site), and future senior residents of the affordable senior housing project under construction at Ninth and Jessie Streets (approximately one block from the project site).

The proposed project would not include pile driving, which tends to generate the loudest noise associated with construction. Finally, as described on page 49 of the Initial Study, the proposed project as well as any other new development in the area would be subject the San Francisco Noise Ordinance, which regulates construction noise.

Ambient noise levels in the project vicinity are typical of noise levels in greater San Francisco, which are dominated by vehicular traffic, including, cars, Muni buses and streetcars, and emergency vehicles. Surrounding land use activities such as surrounding businesses, and temporary construction noise such as street repairs and other construction also contribute to ambient noise levels in the project vicinity. Observation indicates that surrounding land uses do not noticeably conduct noisy operations.

Residential uses are considered more sensitive to higher noise levels than commercial, office, entertainment, and industrial uses, and may include children, the elderly, and those with heightened sensitivity to noise due to illness. The Environmental Protection Element of the *San Francisco General Plan* contains Land Use Compatibility Guidelines for Community Noise.²⁷ These guidelines, which are similar to but differ somewhat from state guidelines promulgated by the Governor's Office of Planning and Research, indicate maximum acceptable noise levels for various newly developed land uses. For residential uses, the maximum "satisfactory" noise level without incorporating noise insulation into a project is 60 dBA (Ldn) (noise requirements are less stringent for PDR uses), while the guidelines indicate that residential development should be discouraged at noise levels above 65 dBA (Ldn).^{28,29} Where noise levels exceed 65 dBA, a detailed analysis of noise reduction requirements will normally be necessary prior to final review and approval, and new construction or development of residential uses will require that noise insulation features are included in the design. In addition, Title 24 of the *California Code of Regulations* establishes uniform noise insulation standards for residential projects. Based on modeling of traffic noise volumes conducted by the San Francisco Department of Public Health (DPH),³⁰ the traffic noise level in the project area vicinity is greater than 70 dBA. Therefore, the proposed project would locate new residential units—considered to be "sensitive receptors"—in an environment with noise levels above those considered normally acceptable for residential uses.

IMPACTS

Significance Criteria

A project would have a significant noise effect if it would:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels;
- Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

²⁷ City and County of San Francisco, Planning Department, *San Francisco General Plan*, Environmental Protection Element, Policy 11.1.

²⁸ Sound pressure is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 dB to 140 dB corresponding to the threshold of pain. Because sound pressure can vary by over one trillion times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Owing to the variation in sensitivity of the human ear to various frequencies, sound is "weighted" to emphasize frequencies to which the ear is more sensitive, in a method known as A-weighting and expressed in units of A-weighted decibels (dBA).

²⁹ The guidelines are based on maintaining an interior noise level of interior noise standard of 45 dBA, Ldn, as required by the California Noise Insulation Standards in Title 24, Part 2 of the California Code of Regulations.

³⁰ Traffic noise map presented on DPH website: <http://www.sfdph.org/dph/EH/Noise/default.asp>.

- Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

Impact Analysis

The Initial Study (see Appendix A) found that the building equipment noise and construction noise impacts of the previously proposed 16-story project would be less than significant. Therefore, the building equipment noise, and construction noise impacts of the currently proposed 14-story project also would be less than significant. The following analyzes the project-specific and cumulative traffic noise effects. Although the Initial Study found interior and operational noise impacts of the proposed project to be less than significant, this EIR will analyze interior and operational noise impacts following updated procedures promulgated by the Department of Public Health, as well a November 2008 amendment to the Noise Ordinance. Therefore, the following also analyzes interior noise impacts of the proposed project.

TRAFFIC NOISE EFFECTS

Generally, traffic must double in volume to produce a noticeable increase in average noise levels. Based on the transportation analysis prepared for the project (see Section III.C, Transportation), traffic volumes would not double on area streets as a result of the proposed project or expected cumulative traffic growth; therefore, the proposed project would not cause a noticeable increase in the ambient noise level in the project vicinity, nor would the project contribute to any potential cumulative traffic noise effects.

As discussed above in III.C, Transportation, traffic in the project vicinity would increase under the cumulative scenario including projects currently under construction, approved, or under review. This increase in traffic, which would be less than a doubling of existing traffic levels, would generate a corresponding increase in traffic noise. At the most congested intersections in the project vicinity, Market Street/Van Ness Avenue and Mission Street/South Van Ness Avenue, the project's share of future traffic growth would be approximately 0.1 percent and 0.4 percent, respectively.³¹ The project's share of total volumes would be less than 0.1 percent at both intersections. These project contributions to traffic

³¹ CHS Consulting Group, op cit. Existing and future cumulative volumes at Mission Street/South Van Ness Avenue are 5,160 and 5,668, respectively, and existing and future cumulative volumes at Market Street/Van Ness Avenue are 4,662 and 5,468, respectively. Project-generated traffic at would be two vehicles at Mission Street/South Van Ness Avenue and one vehicle at Market Street/Van Ness Avenue.

would be much less than the approximate doubling needed to produce a noticeable increase in ambient noise levels in the area (see Table 4, page 91). Therefore, the contribution of traffic and traffic-generated noise associated with the proposed project would not be cumulatively considerable.

NOISE COMPATIBILITY

As noted above, the project site is located in an area where traffic volumes have been measured at, or greater than, 70 dBA. The project sponsor would be required by the San Francisco Noise Ordinance and by Title 24 of the State to incorporate noise insulation features in the project to maintain an interior noise level of 45 dBA. The project sponsor has indicated that an acoustical consultant would be part of the proposed project design team. It is anticipated that, at a minimum, sound-rated windows and/or doors would be installed as part of the proposed project. The DBI would review project plans for compliance with Title 24 noise standards.

Compliance with Title 24 standards and with the San Francisco Noise Ordinance would ensure that effects from exposure to ambient noise would not result in significant impacts, either individually or cumulatively.

OPERATIONAL NOISE EFFECTS

The project would include mechanical equipment that could produce operational noise, such as heating and ventilation systems. These operations would be subject to Section 2909 of the San Francisco Noise Ordinance. As amended in November 2008, this section establishes a noise limit from mechanical sources, such as building equipment, specified as a certain noise level in excess of the ambient noise level at the property line: for noise generated by residential uses, the limit is 5 dBA in excess of ambient, while for noise generated by commercial and industrial uses, the limit is 8 dBA in excess of ambient and for noise on public property, including streets, the limit is 10 dBA in excess of ambient. In addition, the San Francisco Noise Ordinance provides for a separate fixed-source noise limit for residential interiors of 45 dBA at night and 55 dBA during the day and evening hours. Compliance with Article 29, Section 2909, would minimize noise from building operations. Therefore, noise effects related to building operation would not be significant, nor would the building contribute a considerable increment to any cumulative noise impacts from mechanical equipment.

E. AIR QUALITY

The Initial Study (see Appendix A) determined that with implementation of a construction air quality mitigation measure (page 91 of the Initial Study, included here as Appendix A), project-generated air quality impacts of the previously proposed 16-story project would be mitigated to a less-than-significant level (therefore, the air quality impacts of the currently proposed 14-story project also would be mitigated to a less-than-significant level).

Since publication of the Initial Study, the San Francisco Board of Supervisors approved a series of amendments to the San Francisco Building and Health Codes referred to hereto as the Construction Dust Control Ordinance (176-08), effectively codifying the measures contained in the Construction Air Quality mitigation measure, and rendering the mitigation measure unnecessary. The Ordinance is discussed below.

Since publication of the Initial Study, the DPH has published guidelines for assessing the impact of roadway-borne toxic air contaminants on residential projects.³² The thresholds established in the guidelines and the project site's conformance or non-conformance to those thresholds are discussed below.

SETTING

Construction Air Quality

Project-related demolition, excavation, grading and other construction activities may cause wind-blown dust that could contribute particulate matter into the local atmosphere. Although there are federal standards for air pollutants and implementation of state and regional air quality control plans, air pollutants continue to have impacts on human health throughout the country. California has found that particulate matter exposure can cause health effects at lower levels than national standards. The current health burden of particulate matter demands that, where possible, public agencies take feasible available actions to reduce sources of particulate matter exposure. According to the California Air Resources Board, reducing ambient particulate matter from 1998-2000 levels to natural background concentrations in San Francisco would prevent over 200 premature deaths.

³² Rhajiv Bhatia and Thomas Rivard, San Francisco Department of Public Health, *Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review*, May 6, 2008. Available online at <http://www.sfdph.org/dph.comupg/oprograms/EHS/Air/>, accessed January 6, 2009.

Dust can be an irritant causing watering eyes or irritation to the lungs, nose and throat. Depending on exposure, adverse health effects can occur due to this particulate matter in general and also due to specific contaminants such as lead or asbestos that may be constituents of soil.

In response, the San Francisco Board of Supervisors approved a series of amendments to the San Francisco Building and Health Codes generally referred hereto as the Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008) with the intent of reducing the quantity of dust generated during site preparation, demolition and construction work in order to protect the health of the general public and of on-site workers, minimize public nuisance complaints, and to avoid orders to stop work by the Department of Building Inspection (DBI).

Toxic Air Contaminants

The California Air Resources Board (CARB) established its statewide comprehensive air toxics program in the early 1980s. CARB created California's program in response to the Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner 1983) to reduce exposure to air toxics. CARB identifies 244 substances as Toxic Air Contaminants (TACs) that are known or suspected to be emitted in California and have potential adverse health effects. Public health research consistently demonstrates that pollutant levels are significantly higher near freeways and busy roadways. Human health studies demonstrate that children living within 100 to 200 meters of freeways or busy roadways have poor lung function and more respiratory disease; both chronic and acute health effects may result from exposure to TACs. In 2005, CARB issued guidance on preventing roadway related air quality conflicts, suggesting localities "avoid siting new sensitive land uses within 500 feet of a freeway [or other] urban roads with volumes of more than 100,000 vehicles/day."³³ However, there are no existing federal or state regulations to protect sensitive land uses from roadway air pollutants.

The DPH has issued guidance for the identification and assessment of potential air quality hazards and methods for assessing the associated health risks.³⁴ Consistent with CARB guidance, DPH has identified that a potential public health hazard for sensitive land uses exists when such uses are located within a 150-meter (approximately 500-foot) radius of any boundary of a project site that experiences 100,000 vehicles per day. To this end, San Francisco added Article 38 of the San Francisco Health Code, approved November 25, 2008, which requires that, for new residential projects of 10 or more units located in

³³ California Air Resources Board, *2005 Air Quality and Land Use Handbook: A Community Health Perspective*, <http://www.arb.ca.gov/ch/landuse.htm>, accessed September 8, 2008.

³⁴ San Francisco Department of Public Health, *Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review*, May 6, 2008, http://dphwww.sfdph.org/phes/publications/Mitigating_Roadway_AQLU_Conflicts.pdf, accessed September 8, 2009.

proximity to high-traffic roadways, as mapped by DPH, an Air Quality Assessment be prepared to determine whether residents would be exposed to potentially unhealthful levels of PM_{2.5}. Through air quality modeling, an assessment is conducted to determine if the annual average concentration of PM_{2.5} from the roadway sources would exceed a concentration of 0.2 micrograms per cubic meter (annual average).³⁵ If this standard is exceeded, the project sponsor must install a filtered air supply system, with high-efficiency filters, designed to remove at least 80 percent of ambient PM_{2.5} from habitable areas of residential units.

Significance Criteria

A project would have a significant air quality effect on the environment if it were to:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

Impact Analysis

As noted in the Initial Study, the proposed project would not conflict with or obstruct implementation of the applicable air quality plans. Also, it would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment zone, nor would it create objectionable odors affecting a substantial number of people.

³⁵ According to DPH, this threshold, or action level, of 0.2 micrograms per cubic meter represents about 8 – 10 percent of the range of ambient PM_{2.5} concentrations in San Francisco based on monitoring data, and is based on epidemiological research that indicates that such a concentration can result in an approximately 0.28 percent increase in non-injury mortality, or an increased mortality at a rate of approximately 20 “excess deaths” per year per one million population in San Francisco. “Excess deaths” (also referred to as premature mortality) refer to deaths that occur sooner than otherwise expected, absent the specific condition under evaluation; in this case, exposure to PM_{2.5}. (San Francisco Department of Public Health, Occupational and Environmental Health Section, Program on Health, Equity, and Sustainability, “Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review, May 6, 2008. Twenty excess deaths per million based on San Francisco’s non-injury, non-homicide, non-suicide mortality rate of approximately 714 per 100,000. Although San Francisco’s population is less than one million, the presentation of excess deaths is commonly given as a rate per million population.)

CONSTRUCTION AIR QUALITY

The Construction Dust Control Ordinance requires that all site preparation work, demolition, or other construction activities within San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a permit from DBI. The Director of DBI may waive this requirement for activities on sites less than one half-acre that are unlikely to result in any visible wind-blown dust.

The project sponsor and the contractor responsible for construction activities at the project site shall use the following practices to control construction dust on the site or other practices that result in equivalent dust control that are acceptable to the Director. Dust suppression activities may include watering all active construction areas sufficiently to prevent dust from becoming airborne; increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water must be used if required by Article 21, Section 1100 et seq. of the San Francisco Public Works Code. If not required, reclaimed water should be used whenever possible. Contractors shall provide as much water as necessary to control dust (without creating run-off in any area of land clearing, and/or earth movement. During excavation and dirt-moving activities, contractors shall wet sweep or vacuum the streets, sidewalks, paths and intersections where work is in progress at the end of the workday. Inactive stockpiles (where no disturbance occurs for more than seven days) greater than 10 cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base, and soil shall be covered with a 10 millimeter (0.01 inch) polyethylene plastic (or equivalent) tarp, braced down, or use other equivalent soil stabilization techniques.

For projects over one half-acre, the Ordinance requires that the project sponsor submit a Dust Control Plan for approval by the San Francisco Health Department. DBI will not issue a building permit without written notification from the Director of Public Health that the applicant has a site-specific Dust Control Plan, unless the Director waives the requirement. Interior-only tenant improvement projects that are over one-half acre in size that will not produce exterior visible dust are exempt from the site-specific Dust Control Plan requirement.

Site-specific Dust Control Plans shall require the project sponsor to: submit of a map to the Director of Health showing all sensitive receptors within 1000 feet of the site; wet down areas of soil at least three times per day; provide an analysis of wind direction and install upwind and downwind particulate dust monitors; record particulate monitoring results; hire an independent, third-party to conduct inspections and keep a record of those inspections; establish shut-down conditions based on wind, soil migration, etc.; establish a hotline for surrounding community members who may be potentially affected by project-related dust; limit the area subject to construction activities at any one time; install dust curtains and

windbreaks on the property lines, as necessary; limit the amount of soil in hauling trucks to the size of the truck bed and securing with a tarpaulin; enforce a 15 mph speed limit for vehicles entering and exiting construction areas; sweep affected streets with water sweepers at the end of the day; install and utilize wheel washers to clean truck tires; terminate construction activities when winds exceed 25 miles per hour; apply soil stabilizers to inactive areas; and to sweep off adjacent streets to reduce particulate emissions. The project sponsor would be required to designate an individual to monitor compliance with dust control requirements.

These regulations and procedures set forth by the San Francisco Building Code would ensure that potential dust-related air quality impacts would be reduced to a level of insignificance.

TOXIC AIR CONTAMINANTS

The project site, at 1415 Mission Street, is located within the Potential Roadway Exposure Zone, as mapped by DPH. In consultation with DPH, an Air Quality Assessment was prepared. Results of the assessment indicate that the project site does not exceed a PM_{2.5} concentration greater than 0.2 micrograms per cubic meter.³⁶ Thus, the proposed project is not expected to result in a significant impact from exposure of sensitive receptors to high concentrations of roadway-related pollutants.

³⁶ Thomas Rivard, San Francisco Department of Public Health, letter to Stu During, During Associates, dated January 13, 2009. This document is on file and available for review by appointment as part of Case File No. 2005.0540E at the San Francisco Planning Department, 1650 Mission Street, Suite 400.

F. WIND

The proposed building could affect wind conditions around the project site. An independent consultant conducted a wind tunnel test to evaluate the wind impacts of an earlier proposed 16-story project.³⁷ The consultant determined that the results of the study for the prior project would apply to the current project. A number of other projects are expected within the area and the wind tunnel test also evaluated the impact of cumulative development, that is, the proposed project in combination with other proposed projects. The independent consultant and a second independent consultant, provided additional analysis of the wind tunnel results in a memo, called herein the Ballanti-Waechter Memo.³⁸ This section summarizes the wind tunnel test's results and analysis.

SETTING

The project site's wind conditions are moderate to windy. Low- to high-rise structures characterize development around the project site. Wind tunnel measurements under existing conditions include the 1160 Mission Street building and the new Federal Building (facing Market, Seventh, and Mission Streets). Development on the project site includes a one-story building. Winds at the intersection of Market Street and Tenth Street have been the subject of a number of wind tests and studies over the last decade. All tests conducted to date consistently identify high winds and hazard criterion exceedance locations in the area primarily because of the Fox Plaza tower located at Tenth and Market Streets.

Tall buildings and structures can strongly affect the wind environment for pedestrians. Groups of buildings tend to slow winds near ground level. Buildings that are much taller than the surrounding buildings intercept and redirect winds that might otherwise flow overhead. Building walls divert winds downward to the street, where ground-level wind speed and turbulence may be increased. These redirected winds can be relatively strong and incompatible with the intended uses of nearby ground-level areas. Wind conditions affect pedestrian comfort on sidewalks and in other publicly accessible areas. Very high winds can create hazardous conditions.

³⁷ Donald Ballanti, Ph.D., Certified Consulting Meteorologist, Wind Tunnel Analysis for the Proposed 1415 Mission Street Project, San Francisco, March 2007, revised September 8, 2008. This report is included in this EIR in Appendix C.

³⁸ Donald Ballanti, Ph.D., Certified Consulting Meteorologist, and Bill Waechter, C.E.T., Project Director, Rowan, Williams, Davies & Irwin Inc., *Memorandum to Carol Roos, Subject: 1415 Mission Street Wind Tunnel Results*, February 18, 2009. This memorandum is included in this EIR in Appendix C.

U.S. Weather Bureau and Bay Area Air Quality Management District data show that northwesterly winds³⁹ and westerly winds reflect the persistence of sea breezes and are the most frequent wind directions in San Francisco.⁴⁰ Wind direction is most variable in the winter, when strong southerly winds occur frequently during an approaching winter storm. Predictions of wind speed are based upon historic wind records from the U.S. Weather Bureau weather station located atop the old Federal Building at 50 United Nations Plaza during the years 1945-1950.⁴¹ Of the 16 primary wind directions measured at the weather station, four directions occur most frequently and account for most of the strongest winds: northwest, west-northwest, west, and west-southwest. Calm conditions occur about two percent of the time. Average wind speeds are highest during summer and lowest during winter. However, the strongest peak winds occur during winter, when the highest recorded speeds have been 47 miles per hour (mph). Typically, the highest wind speeds occur during the mid-afternoon hours, and the lowest occur during early morning hours.

Wind Evaluation Criteria

BACKGROUND

In order to provide a comfortable wind environment for people in San Francisco, the City has established a wind hazard criterion and comfort criteria for use in evaluating the wind effects of proposed buildings. The *Planning Code* specifically outlines these criteria for the Downtown Commercial (C-3) Use district (Section 148) and each of the Rincon Hill, Folsom and Main, Van Ness Avenue, and South of Market areas (Sections 827(f), 249.1(b)(2), 243(c)(9), and 263.11(c), respectively). The project site is located within a Heavy Commercial (C-M) Use district, but the project sponsor proposes to rezone the site to Downtown General Commercial (C-3-G) and the *Planning Code's* wind provisions would apply to the proposed project. Even when a project lies outside of the specific areas to which the *Planning Code's* wind provisions apply, the San Francisco Planning Department, as lead agency for the implementation of CEQA, uses the *Planning Code's* wind hazard criterion and pedestrian comfort criteria for evaluating wind impacts of a proposed building located anywhere in the City. Both the hazard criterion and the comfort criteria are based on pedestrian-level wind speeds, referred to as "equivalent wind speeds," that

³⁹ Winds blow from the referenced direction. Thus, northwesterly winds are from the northwest, westerly winds are from the west, and southerly winds are from the south.

⁴⁰ The discussion of wind directions in this report uses the actual points of the compass rather than applying the convention of calling northwest-to-southeast directions "north-south" and northeast-to-southwest directions "east-west" used elsewhere in this document.

⁴¹ Although the information is over 50 years old, it represents the best available data on wind conditions in Downtown San Francisco and was the data source on which the San Francisco Wind Ordinance is based. Moreover, the U.S. Weather Bureau station was relocated away from the City Center and there is no other source of wind information available.

include the effects of gustiness and turbulence.”⁴² Seating criteria apply to seating areas at ground level or areas above ground level where seating is provided or proposed to be provided.

WIND HAZARD CRITERION

The *Planning Code*'s wind hazard criterion is 36 mph equivalent wind speed for a single full hour that is not to be reached or exceeded once during the year, or approximately 0.0114 percent of the time.⁴³ No building or addition would be permitted that would cause wind speeds to exceed the hazard criterion, and no exception may be granted (although as noted previously, the project sponsor would seek a Variance from the hazard criterion, for the reasons discussed below).

PEDESTRIAN AND SEATING COMFORT CRITERIA

The *Planning Code* establishes two comfort criteria, an equivalent wind speed of 7 mph in public seating areas and 11 mph in areas of substantial pedestrian use. New buildings and additions to buildings may not cause ground-level winds to exceed these levels more than 10 percent of the time.⁴⁴ In areas where the *Planning Code*'s wind controls apply, new buildings and additions must meet the comfort criteria at all test locations, reduce existing wind exceedances below the comfort criteria, and not increase winds above the comfort criteria; or the design team must redesign the building to meet the comfort criteria unless allowable exceptions would apply. Compliance with the *Planning Code* pedestrian and seating comfort criteria requirements would be considered during the project review process, not the environmental review process.

Methodology

In administering the *Planning Code* and implementing CEQA, the Planning Department requires wind tunnel testing for tall buildings to determine wind hazard and pedestrian comfort conditions, and to provide a basis for design modifications to mitigate any significant impacts. This section presents the

⁴² Equivalent mean wind speed is defined as the mean wind speed multiplied by the quantity (one plus three times the turbulence intensity divided by 1.45) to incorporate the effects of gustiness or turbulence on pedestrians in the criterion.

⁴³ The *Planning Code* uses adjusted equivalent wind speed to define the hazard criterion and the comfort criteria. However, the hazard criterion speed is a full-hour average speed of 26 mph that is not comparable to comfort criteria data, which has shorter, one-minute averaging intervals. As a result, it is convenient to adjust the hazard speed so that all three criteria estimates are comparable. When adjusted, the hazard criterion wind speed becomes 36 mph, and the comfort criteria remain at 7 mph seating and 11 mph standing/walking.

⁴⁴ The *Planning Code* sections discussed in the text specify the hours of 7:00 a.m. to 6:00 p.m. The available weather data cover the hours of 6:00 a.m. to 8:00 p.m. Thus, observation from two additional evening hours and one additional morning hour are included in these data. Because winds are generally stronger in the afternoon and evening than in the morning, this approximation is conservative – it is likely to overestimate the existing and projected wind speeds.

results of the wind tunnel tests for the project site and vicinity under three scenarios: (1) existing conditions, (2) existing conditions plus the proposed project, (3) existing conditions plus the proposed cumulative development including the project. The completed 1160 Mission Street building and the recently completed Federal Building (facing Market, Seventh, and Mission Streets) are included in the existing conditions scenario. The following projects are included in the cumulative development scenario:

- 1177 Market Street project (approved)
- 1125 Market Street project (under review)
- Mercy residential project on Mission Street (between Ninth and Tenth Streets) (approved)
- 77 Van Ness Avenue project (approved)
- 1 Polk project (under construction)
- 55 Ninth Street project (under review)
- Fox Plaza project on Market Street (under review)
- Tenth and Market Street project (approved)
- 1355 Market Street project (included in the study, but application has since been withdrawn)

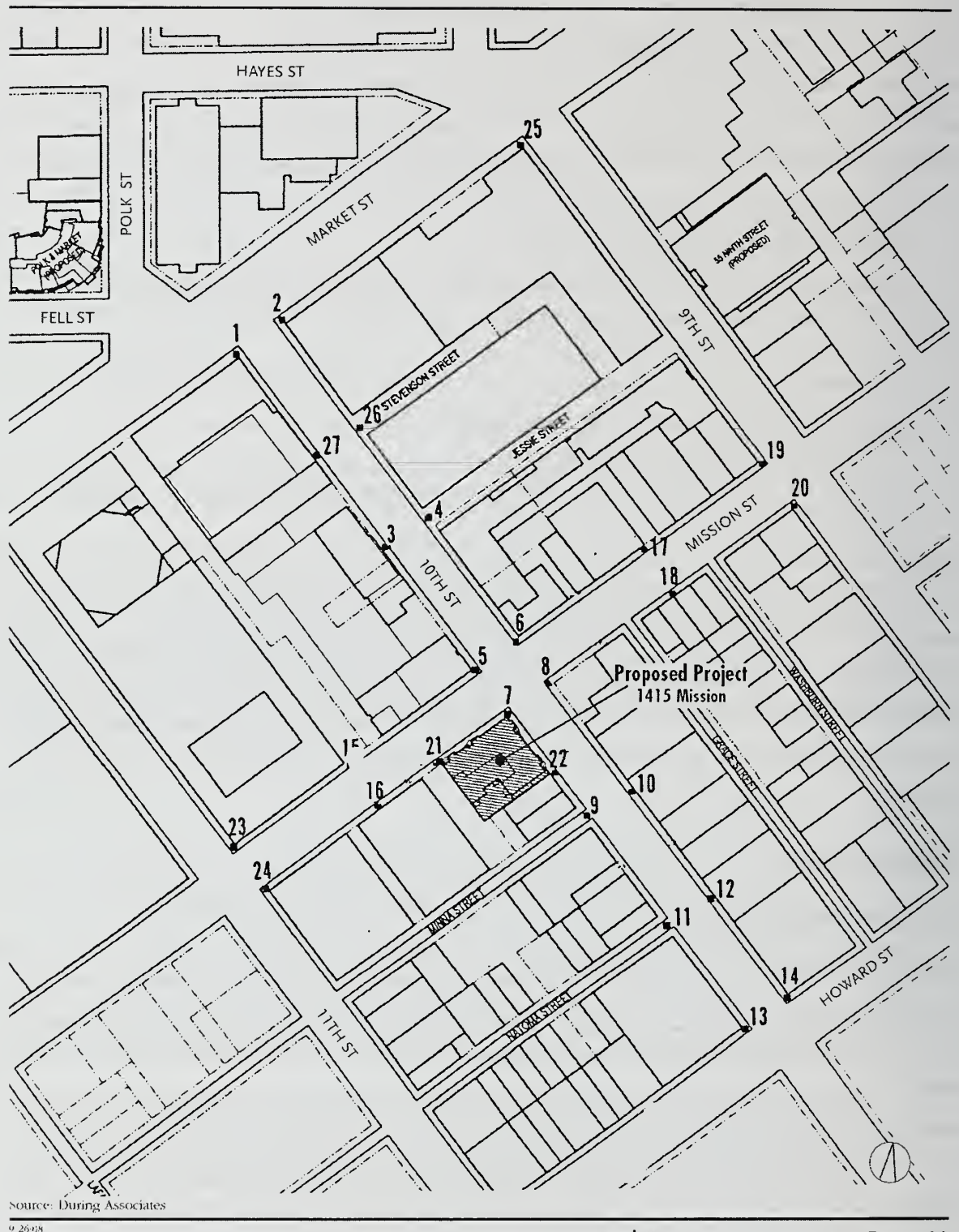
Using a wind tunnel and a scale model of the project site and surrounding area, wind speed measurements were taken at 27 test locations (see Figure 20, page 114) located along sidewalk areas adjacent to and near the project site. To identify the *Planning Code's* applicable wind comfort criteria, the 27 test locations are considered pedestrian locations rather than sitting locations (i.e. no location was identified exclusively for seating). In accordance with the San Francisco wind ordinance methodology, the consultant tested four prevailing wind directions: northwest, west-northwest, west, and west-southwest.

Existing Conditions

EXISTING WIND HAZARD CONDITIONS

The average existing wind speed, calculated for hazard measurement, for all 27 test points is 24 miles per hour (mph), as shown in Table 7 on page 115. The analysis indicates that existing wind conditions exceed the *Planning Code's* wind hazard criterion of 36 mph at one of the 27 test locations: location 1 at the southwest corner of Market and Tenth Streets, one block north of the proposed project. The estimated equivalent wind speed of this existing exceedance is 50 mph and its estimated duration is 94 hours per year. Aside from this exceedance, existing wind speeds range from 14 mph at location 22 at the southeast corner of the project site to 31 mph at location 4 at Tenth and Jessie Streets, and 32 mph at location 23 (northeast corner of the intersection of Mission and Eleventh Streets) and location 25 (southwest corner of the intersection of Market and Ninth Streets). Existing wind speed at the other two corners of the project

III. ENVIRONMENTAL SETTING AND IMPACTS
F. WIND



Wind Measurement Locations Figure 20

Table 7
Wind Hazard Conditions¹

| References | | Analysis Scenarios | | |
|-----------------|------------------------------|--------------------|-----------------------------|--|
| Location Number | Hazard Criterion Speed (mph) | Existing | Existing + Proposed Project | Existing + Cumulative (including proposed project) |
| 1 | 36 | 50* | 48* | 51** |
| 2 | 36 | 25 | 26 | 24 |
| 3 | 36 | 16 | 16 | 24 |
| 4 | 36 | 31 | 31 | 25 |
| 5 | 36 | 17 | 17 | 21 |
| 6 | 36 | 21 | 21 | 17 |
| 7 | 36 | 18 | 23 | 26 |
| 8 | 36 | 15 | 21 | 29 |
| 9 | 36 | 23 | 25 | 25 |
| 10 | 36 | 20 | 20 | 17 |
| 11 | 36 | 24 | 23 | 18 |
| 12 | 36 | 15 | 18 | 18 |
| 13 | 36 | 32 | 32 | 28 |
| 14 | 36 | 25 | 24 | 25 |
| 15 | 36 | 21 | 23 | 17 |
| 16 | 36 | 24 | 23 | 25 |
| 17 | 36 | 19 | 16 | 14 |
| 18 | 36 | 20 | 18 | 18 |
| 19 | 36 | 24 | 25 | 31 |
| 20 | 36 | 26 | 24 | 28 |
| 21 | 36 | 24 | 20 | 25 |
| 22 | 36 | 14 | 21 | 15 |
| 23 | 36 | 32 | 30 | 34 |
| 24 | 36 | 26 | 27 | 29 |
| 25 | 36 | 32 | 33 | 34 |
| 26 | 36 | 26 | 24 | 36 |
| 27 | 36 | 20 | 19 | 30 |
| Average | NA | 24 | 24 | 25 |

Notes:

NA = Not applicable.

Bold* = existing exceedance; **Bold**** with darker cell shading = new exceedance.

¹ Wind speed is given in miles per hour (mph) of measured equivalent wind speed.

Source: During Associates and Donald Ballanti, Certified Consulting Meteorologist, March 2007.

site are 24 mph at location 21 (northwest corner of the project site) and 18 mph at location 7 (northeast corner of the project site).

EXISTING PEDESTRIAN COMFORT CONDITIONS

The average existing wind speed, calculated for comfort measurement, for all 27 test points is 11.3 mph, as shown in Table 8 on page 117. Wind speeds range from 5 to 20 mph. Wind speeds greater than the 11 mph comfort criterion occur at 12 of the 27 test locations. The highest wind speed in the vicinity (20 mph) occurs at location 1 on the southwest corner of the intersection of Market and Tenth Streets. The lowest wind speed of five mph occurs at location 17, which is mid-block on the north side of Mission Street between Ninth and Tenth Streets, one-half block east of the project site. Wind speeds vary from 6 to 13 mph at and near the project site (locations 21, 7, and 22) and at the other three corners of the intersection of Mission and Tenth Streets (locations 5, 6, and 8).

IMPACTS

Significance Criteria

The San Francisco Planning Department determines that a proposed project would have a significant impact on wind conditions if a project would cause equivalent wind speeds to reach or exceed 36 mph for a single full hour of the year.

A project that would exceed the pedestrian comfort standards would not be considered to have a significant adverse environmental impact. Comfort standards are addressed during the design review and approval process. Wind speeds relative to the comfort criterion of 11 mph are discussed, however, as part of the wind analysis.

Existing Conditions Plus the Proposed Project

The conditions tested in this scenario consisted of the existing buildings and structures in the project vicinity, plus models of the proposed project, the recently completed 1160 Mission Street building, and the recently completed Federal Building.

WIND HAZARD CONDITIONS

Based on the results of the wind tunnel study, sidewalk conditions with the proposed project compared to existing conditions without the project would be windier in some locations and less windy in others. With the proposed project compared to existing conditions, measured equivalent wind speeds would

Table 8
Wind Comfort Conditions¹

| References | | Analysis Scenarios | | |
|-----------------------|-------------------------------|--------------------|-----------------------------|--|
| Location Number | Comfort Criterion Speed (mph) | Existing | Existing + Proposed Project | Existing + Cumulative (incl. proposed project) |
| 1 | 11 | 20* | 19* | 23* |
| 2 | 11 | 15* | 14* | 14* |
| 3 | 11 | 10 | 9 | 13** |
| 4 | 11 | 17* | 18* | 14* |
| 5 | 11 | 8 | 8 | 10 |
| 6 | 11 | 12* | 12* | 10- |
| 7 | 11 | 10 | 14** | 14** |
| 8 | 11 | 9 | 11 | 15* |
| 9 | 11 | 8 | 9 | 9 |
| 10 | 11 | 8 | 8 | 10 |
| 11 | 11 | 9 | 9 | 9 |
| 12 | 11 | 8 | 8 | 9 |
| 13 | 11 | 9 | 8 | 7 |
| 14 | 11 | 14* | 14* | 14* |
| 15 | 11 | 8 | 8 | 10 |
| 16 | 11 | 13* | 12* | 14* |
| 17 | 11 | 5 | 5 | 7 |
| 18 | 11 | 10 | 10 | 10 |
| 19 | 11 | 11 | 10 | 12** |
| 20 | 11 | 14* | 13* | 13* |
| 21 | 11 | 13* | 11- | 13* |
| 22 | 11 | 6 | 8 | 8 |
| 23 | 11 | 18* | 17* | 19* |
| 24 | 11 | 13* | 13* | 14* |
| 25 | 11 | 15* | 15* | 17* |
| 26 | 11 | 14* | 14* | 15* |
| 27 | 11 | 10 | 9 | 14** |
| Average (mph) | | 11.3 | 11.4 | 12.4 |
| Total No. Exceedances | | 12 | 12 | 16 |
| No. New vs. Existing | | 0 | 1 | 5 |
| No. Eliminated | | NA | 1 | 1 |

Notes:

NA = Not applicable.

Bold star* = existing exceedance; **Bold double star**** with darker cell shading = new exceedance compared to existing; **Bold Italics and dash- with light shading** = elimination of an exceedance.

¹ Wind speed is given in miles per hour (mph) of measured equivalent wind speed.

Source: During Associates and Donald Ballanti, Certified Consulting Meteorologist, March 2007.

increase at 10 locations, remain unchanged at six locations, and decrease at 11 locations. The average equivalent wind speed for the study area test locations would not change from the existing 24 mph. The highest measured equivalent wind speed would be approximately 48 mph at the southwest corner of the intersection of Market and Tenth Streets at location 1, a decrease of two mph from the existing 50 mph hazard exceedance. The duration of this exceedance would be 58 hours, a 38 percent decrease from the existing 94 hours. Aside from this location, wind speeds would range from 16 to 33 mph under the proposed project compared to 14 to 32 mph under existing conditions. Conditions at the project site and at the intersection of Mission and Tenth Streets would range from 17 to 23 mph compared to 15 to 24 mph under existing conditions. Although the project would worsen conditions, the change would not be substantial. Because the proposed project would not create a new wind hazard criterion exceedance and would not increase an existing hazard exceedance, project-specific wind impacts would be less than significant.

PEDESTRIAN COMFORT CONDITIONS

The average equivalent wind speed for the study area test locations would increase one-tenth of one mph, from 11.3 to 11.4 mph under the proposed project. Wind speeds would range from 5 to 19 mph, compared to existing wind speeds of 5 to 20 mph. The proposed project would eliminate one existing pedestrian comfort criterion exceedance at location 21, the northwestern corner of the project site, where wind speed would decrease from 13 to 11 mph. It would add one new exceedance at location 7, the northeastern corner of the project site, where wind speed would increase from 10 to 14 mph. Wind speeds at the project site (three corners at locations 21, 7, 22) and the other three corners of the intersection of Mission and Tenth Streets (locations 5, 6, and 8), would range from 8 to 14 mph compared to 8 to 13 mph under existing conditions.

Cumulative Development

The projects included in the cumulative development scenario are described in Methodology, page 113.

HAZARD WIND CONDITIONS

Under cumulative conditions, the average equivalent wind speed for the study area test locations would increase from the existing 24 mph to 25 mph. The highest measured equivalent wind speed would be approximately 51 mph at the southwest corner of the intersection of Market and Tenth Streets (location 1), an increase of one mph over existing conditions. The wind tunnel results predicted the exceedance's duration would be 109 hours per year, a 16 percent increase over the existing 94 hours. Under cumulative conditions without the proposed project, the wind tunnel results predicted that the exceedance's duration would drop to 80 hours per year, a 15 percent decrease. Aside from the cumulative exceedance attributed

to the project, wind speeds would range from 14 to 36 mph under cumulative conditions compared to 14 to 32 mph under existing conditions. Wind speed at the project site and at the intersection of Mission and Tenth Streets would range from 15 to 25 mph compared to 14 to 24 mph under existing conditions. The wind tunnel test predicted that cumulative development would increase the wind speed of the existing wind hazard exceedance by one mph and the duration by 15 hours per year.

In extremely windy areas such as the intersection of Tenth and Market Streets, the calculated hours of exceedance for a single wind tunnel test may not be a precise indicator of project impact. Margins of error for wind velocity measurements increase rapidly once wind velocities reach the hazard level of 26 mph, and small changes in wind speed measurements equate to large changes in the calculated hours of exceedance. The volatility of the windspeed calculation procedure is amplified by the inherent uncertainty in measuring wind in the tunnel. The limited precision of the measuring equipment, uncertainty in the location and orientation of individual sensors, and other technological factors can affect wind tunnel results. In extremely windy locations, these factors can result in widely varying results for similar development scenarios.

The intersection of Tenth and Market Streets has been the subject of a number of wind tests and studies over the past decade. All wind tunnel tests conducted to date have shown exceedances of the wind hazard criterion at this location. However, because of the uncertainty inherent in the wind tunnel methodology in the high-velocity wind environment, the calculated number of hours of exceedance in these independent tests varied widely even for similar, or identical, cumulative scenario runs.

While the calculated hours of exceedance differ from test to test, the overall pattern presented by the multiple tests present a more consistent picture of the likely effect of cumulative development on the wind environment at Tenth and Market Streets. Recent tests for the nearby Fox Plaza Expansion Project, the Tenth/Market/Mission Mixed-Use Project (now known as the Market Street Residential Project), and the 1355 Market Street (SF Mart) Project evaluated cumulative development scenarios that included all the same buildings, including the 1415 Mission Street Project.⁴⁵ These studies consistently found that hazard winds at the Market and Tenth Street intersection are generated by Fox Plaza, and that cumulative development in the vicinity is expected to reduce the incidence and duration of winds exceeding the hazard criterion.

The quantitative findings of the wind tunnel test for the Market Street Residential Project were supplemented by computer modeling studies, methodology that uses a computer program to generate color maps showing relative wind velocities. The computer modeling technique provides a consistent,

⁴⁵ These reports are available for public review by appointment at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, as part of the project file 2005.0540E.

repeatable means of comparing different building scenarios, but is qualitative in nature and does not result in values on the number of hazardous wind hours generated.

The computer modeling study for the Market Street Residential Project, like the wind tunnel study, indicated that hazard winds at the intersection of Tenth and Market Streets were controlled by the Fox Plaza Building and that even large buildings proposed at the intersection of Tenth and Market Streets were not expected to create significant changes in the wind environment. The computer modeling study for the Market Street Residential Project also indicated that cumulative development in the area would not noticeably change wind speeds at Tenth and Market Streets. The 1415 Mission Street project was excluded from the computer modeling, because it was not anticipated to influence wind conditions at the intersection of Tenth and Market Streets due to its relatively distant, downwind location.

The Ballanti-Waechter Memo evaluated the results of the wind tunnel test in light of these previous studies, the size and location of the project, and the known limitations of the wind tunnel model. The evaluation concluded that the 1415 Mission Street project would not substantially affect wind at the intersection of Market and Tenth Streets. Wind impacts propagate downwind from a building, and the intersection of Tenth and Market Streets is a full block upwind of 1415 Mission Street. The Ballanti-Waechter Memo concludes that the project would not exert a significant influence on the wind environment at this distance.

For these reasons, the wind consultants concluded that the wind hazard exceedances predicted by the wind tunnel test do not constitute statistically significant evidence of a cumulative wind effect caused by the project. Instead, the increase in hazard wind hours predicted by the wind tunnel test are attributed to the inherent uncertainty associated with the wind tunnel methodology under very windy conditions. In view of the above, the Planning Department has determined that the proposed project would not cause a significant adverse cumulative wind hazard impact, nor would the proposed project contribute considerably to any significant adverse cumulative wind hazard impact.

PEDESTRIAN COMFORT CONDITIONS

Cumulative development would increase the average equivalent wind speed for the study area test locations by 1.1 mph, from 11.3 to 12.4 mph. Wind speeds would range from 7 to 23 mph, an increase compared to the existing 5 to 20 mph. Cumulative development would eliminate one existing pedestrian comfort criterion exceedance at location 6, the northeastern corner of the intersection of Mission and Tenth Streets across from the project site, where wind speed would decrease from 12 to 10 mph. It would add five new exceedances over existing conditions at locations 3, 7, 8, 19, and 27. Wind speeds at the project site (three corners at locations 21, 7, 22) and the other three corners of the intersection of Mission

and Tenth Streets (locations 5, 6, and 8), would range from 8 to 15 mph compared to 8 to 13 mph under existing conditions. Pedestrian comfort criterion exceedances would not be considered a significant cumulative environmental impact.

CONCLUSION

The proposed project would eliminate one existing pedestrian comfort criterion exceedance and add one new exceedance, however, these would not be considered significant impacts. Pedestrian comfort criterion exceedances also would not be considered significant cumulative impacts. Likewise, the proposed project would not have a project-specific significant wind hazard impact because it would not cause a wind hazard criterion exceedance at a new location and would not increase the wind speed or duration of an existing exceedance. As discussed above, in extremely windy areas, wind tunnel tests may not be precise indicators of project impacts and variation may be attributed to measurement and calculation uncertainty. The proposed project would not contribute to a significant adverse cumulative wind hazard impact. Cumulative development would also add five new locations of pedestrian comfort criterion exceedances and eliminate one existing exceedance, which would not be considered significant impacts.

G. SHADOW

The Initial Study (see Appendix A) found that a previously proposed 16-story version of the proposed building does not have the potential to cast new shadow on the Joseph L. Alioto Performing Arts Piazza, the nearest public open space in the vicinity of the project site under the jurisdiction of the Recreation and Park Department or any other property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Department. However, the Initial Study found that public open space not under Recreation and Park Department jurisdiction could be affected by the earlier proposed project. The currently proposed project retains the same configuration as the larger project and its shorter building envelope is within the envelope of the earlier proposed project; hence, the currently proposed project's shadow impacts would be somewhat reduced from the impacts evaluated below.

SETTING

The nearest public open spaces in the project vicinity include: the Joseph L. Alioto Performing Arts Piazza (Civic Center Plaza), located three blocks to the north; Howard and Langton Mini-Park, located approximately four blocks east; Victoria Manalo Draves Park, located approximately five blocks east of the of the project site; and Hayes Green (also known as Patricia's Garden), located approximately five blocks west.

Shadow in San Francisco is regulated through Section 295 of the *Planning Code*, the "Sunlight Ordinance," adopted through voter approval of Proposition K in November 1984 to protect certain public open spaces from shadowing by new structures. Section 295 prohibits the issuance of building permits for structures or additions to structures greater than 40 feet in height that would shade property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission, during the period from one hour after sunrise to one hour before sunset, unless the Planning Commission, following review and comment by the general manager of the Recreation and Park Department and in consultation with the Recreation and Park Commission, determines that such shade would have an insignificant impact on the use of such property.

IMPACTS

Significance Criteria

A project would have a significant environmental impact if it would create substantial new shadow on outdoor public recreation facilities or other public areas. Section 295 of the *Planning Code* restricts net new

shadow on public open spaces under the jurisdiction of, or to be acquired by, the Recreation and Park Commission, by any structure exceeding 40 feet in height during the period between one hour after sunrise and one hour before sunset, year round.

Impact Analysis

The proposed project would exceed 40 feet in height, and is subject to evaluation under Section 295 of the *Planning Code*. To determine whether this proposed project would conform to Section 295, a shadow fan study was prepared by the Planning Department for a previously proposed 16-story version of the project.⁴⁶ The shadow fan study indicated that the previously proposed 16-story project does not have the potential to cast new shadow on the Joseph L. Alioto Performing Arts Piazza. Therefore, the currently proposed 14-story project also would not have the potential to cast shadow on the Piazza, and its shadow impact would be less than significant.

For the previously proposed 16-story version of the project, shadow simulations were prepared for representative times of the day during the first day of each of the four seasons: the winter solstice (December 21), when the sun is at its lowest zenith (high point in the sky above the horizon); the summer solstice (June 21), when the sun is at its highest; and during the spring and fall equinoxes (March 21 and September 21, respectively), when the sun is at its midpoint (Figures 21, 22, 23, and 24, pages 124 through 127).⁴⁷ The times selected for analysis include 9:00 a.m., 12:00 noon, and 3:00 p.m. In Figures 25 through 28 in the following pages, shadows from existing structures are shown in gray and the proposed project's shadows are shown in black for the four seasons.

DECEMBER

On September 21 at 9:00 a.m., the previously proposed 16-story project would cast shadows onto the surface parking lot at 1400 Mission Street, on the north side of Mission Street, the site of an approved 137-unit affordable housing project discussed in Land Use and Zoning Setting, page 53 (Figure 21, page 124). At 9:00 a.m., the previously proposed 16-story project would also shadow a portion of Tenth Street north of Mission Street and the southeast corner of the site of the approved 720-unit 1401 Market Street project at the southwest corner of Market and Tenth Streets. At noon, the previously proposed 16-story project would shadow virtually the entire intersection and nearby segments of Mission and Tenth Streets, a

⁴⁶ San Francisco Planning Department, letter dated August 23, 2007 (Case No. 2005.0540K), 1415 Mission Street, Shadow Analysis. A copy of this document is available for review, by appointment, at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, in File No. 2005.0540E.

⁴⁷ CADP, *Shadow Diagrams for Proposed 1415 Mission Street Mixed use Development*, February 2, 2007. These figures are on file with the Planning Department, 1650 Mission Street, Suite 400, San Francisco, and are available for public review, by appointment, as part of the project file No. 2005.0540K.

III. ENVIRONMENTAL SETTING AND IMPACTS
G. SHADOW



December 21—9:00AM



December 21—12:00PM



December 21—3:00PM

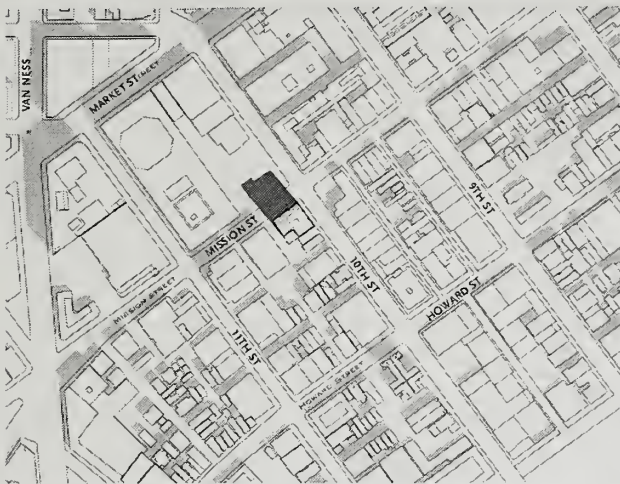
Source: CADD

9-26-08



Net new project shadow

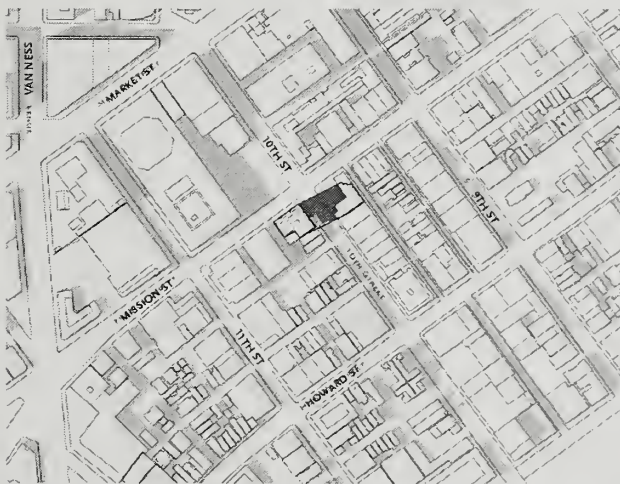
Proposed Project Shadow: December PST Figure 21



March 21—9:00AM



March 21—12:00PM



March 21—3:00PM



Net new project shadow

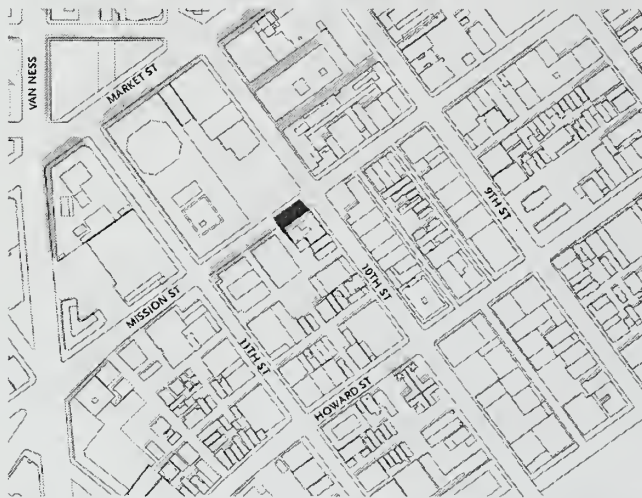
Source: CADD
9/26/08

Proposed Project Shadow: March PST Figure 22

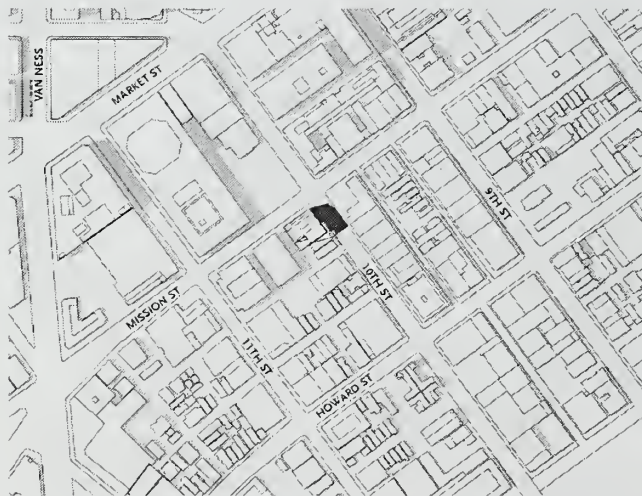
III. ENVIRONMENTAL SETTING AND IMPACTS
G. SHADOW



June 21—9:00AM



June 21—12:00PM



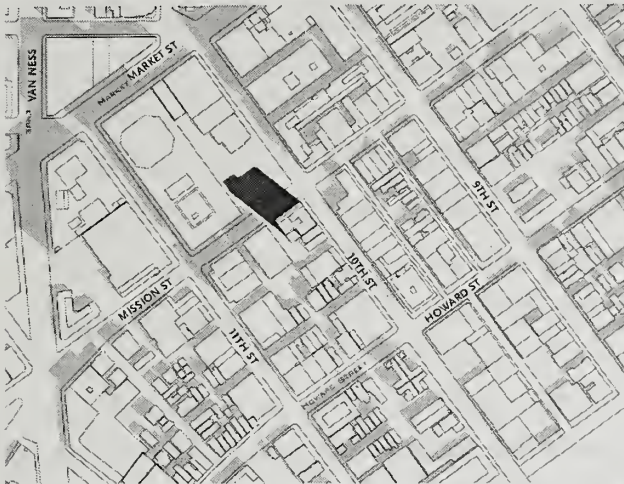
June 21—3:00PM

SOURCE: CADD

9/26/09



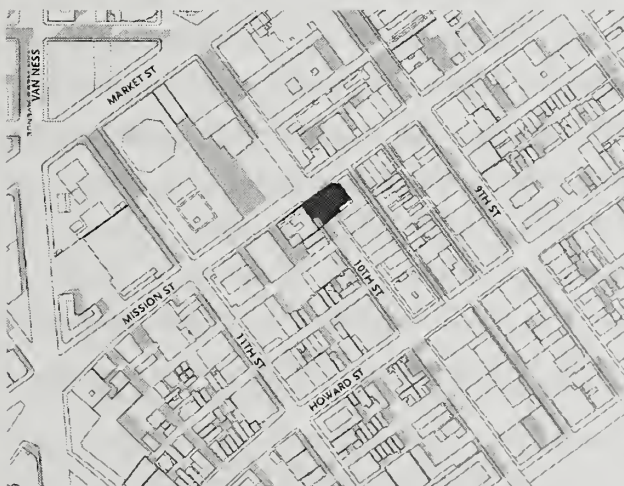
Proposed Project Shadow: June PDT Figure 23



September 21—9:00AM



September 21—12:00PM



Net new project shadow

September 21—3:00PM

SOURCE: CADD

9/26/08

Proposed Project Shadow: September PDT Figure 24

portion of the surface parking lot on the north side of Mission Street mentioned above, and the one-story restaurant (Fox Plaza, 1390 Mission Street) and surrounding parking area on the northeast corner of Mission and Tenth Streets. At 3:00 p.m., the previously proposed 16-story project would add new shadow to the block face on the south side of Mission Street, from Tenth Street, as well as a portion of the surface parking area west of the three-story industrial building (1375-1385 Mission Street) located between Tenth and Grace Streets. At all three times of the day, the shadow impacts of the currently proposed 14-story project would be slightly less than the previously proposed 16-story building.

MARCH

On March 21 at 9:00 a.m., as shown in Figure 22, page 125, the previously proposed 16-story project would cast shadows to the north across Mission Street onto the paved surface parking lot on the north side of Mission Street, the site of the approved 137-unit affordable housing project at 1400 Mission Street discussed above. At noon, the previously proposed 16-story project would shadow adjacent segments of Mission and Tenth Streets, along with a portion of the sidewalk on the north side of Mission Street. At 3:00 p.m., the previously proposed 16-story project shadow would cross the adjacent segment of Tenth Street, along with a paved surface parking area and the western side of a three-story industrial building (1375-1385 Mission Street) located between Tenth and Grace Streets. At all three times of the day, the shadow impacts of the currently proposed 14-story project would be slightly less than the 16-story version.

JUNE

On June 21 at 9:00 a.m., the previously proposed 16-story project would shadow the adjacent segment of Mission Street to the north including a segment of sidewalk on the north side of the street, a small portion of the surface parking lot on the north side of Mission Street (the site of the approved affordable housing project mentioned above), and a small portion of the walls of the southeast corner of the mixed use 1455 Market Street building on the north side of Mission Street (Figure 23, page 126). At noon, the previously proposed 16-story project would shadow the southern portion of Mission Street. At 3:00 p.m., the previously proposed 16-story project would shadow the adjacent segment of Tenth Street to the east. At all three times of the day, the shadow impacts of the currently proposed 14-story project would be slightly less than the 16-story version.

SEPTEMBER

On September 21 at 9:00 a.m., the previously proposed 16-story project would cast shadows to the north across Mission Street onto the surface parking lot on the north side of Mission Street, the site of the approved affordable housing project mentioned above (Figure 24, page 127). At noon, the previously

proposed 16-story project would shadow the adjacent segment of Mission Street and the parking lot to the north, as well as portions of Tenth Street. At 3:00 p.m., the previously proposed 16-story project would shadow the adjacent segment of Tenth Street and the surface parking area west of the three-story industrial building (1375-1385 Mission Street) located between Tenth and Grace Streets. At all three times of the day, the shadow impacts of the currently proposed 14-story project would be slightly less than the 16-story version.

Conclusion: Shadow

As discussed above, no public open space, including open space not under Recreation and Park Department jurisdiction, would be affected by the proposed project. The project would cast net new shadows on limited areas of nearby buildings, streets, and sidewalks during certain times of the morning and afternoon. During various times of the year, net new project shadows would affect portions of the approved residential projects at the southwest corner of Market and Tenth Streets and on the north side of Mission Street across from the project site. However, project shadows would only affect portions of these buildings (if constructed) during morning hours. Results of the shadow analysis indicate (as shown on Figures 21 to 24) that residents south of the project site, in particular residents along Minna and Natoma Streets, would not experience new shadow generated from the proposed 14-story building at the times and months of this shadow analysis. Furthermore, project-generated shadows would be minor relative to shadows currently generated by existing buildings in the project vicinity. Although the new building would shade adjacent properties, it would not increase the total amount of shading in the neighborhood above levels that are common and generally accepted in urban areas. Shading of the adjacent private buildings would not meet the City's significance criteria for shadow impacts. Given the dense urban setting of the proposed project, the proposed project does not have the potential to cast new shadow on the Joseph L. Alioto Performing Arts Piazza), and the limited extent of the shadowing on streets, sidewalks, and buildings, the shading which would result from the proposed project does not rise to the level of a potentially significant environmental impact.

Cumulative Effects

As discussed above, the project would have a less-than-significant project-specific impact on shadow. The projects under construction, approved, and proposed in the surrounding area would cast new shadows (see Land Use and Zoning Setting, page 55, for a list of projects); however, like the proposed project, none of the cumulative projects would be able to cast new shadows on any publically accessible open space protected by Section 295.

Planning Code Section 146(a) includes sunlight access criteria to allow direct sunlight to reach sidewalk areas of designated streets during critical hours of the day. In the case of sidewalks, the critical hours are considered to be the hours around noon. The Code designates two streets within the project area as subject to Section 146(a): (1) Market Street, from Tenth to Second Street, and (2) Market Street, from South Van Ness to Twelfth Street. Any new development identified in the cumulative scenario that abut the south side of Market Street must avoid penetration into the sun access plane defined by a 50-degree angle sloping away from the street above 119 feet at the property line abutting the street. Individual new development projects within the project area must comply with Section 146(a) requirements, or obtain an allowable exception under Section 309 of the *Planning Code*. As illustrated in Figures 21 through 24, the proposed project would not impact either area subject to Section 146(a).

Planning Code Section 146(c) includes sunlight access criteria to reduce substantial shadow impacts on public sidewalks in the C-3 Districts other than those protected by Section 146(a). New buildings and additions to existing structures must minimize any substantial shadow impacts in the C-3 (Downtown) districts not protected under Subsection (a), as long as this can be accomplished without the creation of unattractive building design and the undue restriction of development potential. This provision would apply to the project site by virtue of its rezoning to C-3-G. As indicated above under Impact Analysis (page 123), the proposed project would shade portions of Tenth and Mission Streets at various times of the day. However, as noted above under Impact Analysis, the amount of shadow would not be considered significant.

As individual development projects are proposed, shadow impacts will be analyzed and the degree of significance determined. The proposed project's contribution to potential cumulative impacts would be considered less than significant.

IV. MITIGATION AND IMPROVEMENT MEASURES

In the course of project planning and design, measures have been identified that would reduce or eliminate potentially significant environmental impacts of the proposed project. Decision-makers would require mitigation measures and may require improvement measures identified in this EIR and in the Initial Study as conditions of project approval, unless they are demonstrated to be infeasible based on substantial evidence in the record. Implementation of some measures may be the responsibility of public agencies. This chapter includes two types of measures: (1) mitigation measures that would avoid potentially significant impacts; and (2) improvement measures proposed to reduce less-than-significant project effects. Measures from the Initial Study (see Appendix A) proposed as part of the proposed project are indicated with an asterisk (*).

A. MITIGATION MEASURES

MITIGATION MEASURE 1

Archeology (Testing) *

Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the Environmental Review Officer (ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a

suspension is the only feasible means to reduce to a less-than-significant level of potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5(a)(c).

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that could potentially be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

- A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program (AMP). If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soil-disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because

of the risk these activities pose to potential archaeological resources and to their depositional context;

- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with the project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program.* Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report.* Description of proposed report format and distribution of results.
- *Curation.* Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Section 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines, Section 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site

recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

MITIGATION MEASURE 2

Hazards (Underground Storage Tanks) *

The project sponsor has conducted a geophysical survey of the project site, which detected an underground object that could potentially be an underground storage tank (UST). During excavation and prior to construction, an additional geophysical investigation of surrounding sidewalk areas shall be conducted, under the direction of the San Francisco Department of Public Health (DPH). If it is determined during the additional geophysical investigation of surrounding sidewalk areas, or during construction, that a UST is in fact present, construction work shall be stopped and permits from the City Hazardous Material Unified Program Agency (HMUPA), Fire Department, and, if required, DPW (Streets and Sidewalk) shall be obtained for the UST (and related piping) removal. HMUPA, SFFD (and possibly DPW) will make inspections prior to removal, and only upon approval of the inspector may the UST be removed from the ground. Appropriate soil and, if necessary, groundwater samples shall be taken at the direction of the HMUPA inspector and analyzed. Appropriate transportation and disposal of the UST shall be arranged. If analytical results indicate non-detectable or low levels of contamination, HMUPA will issue a "Certificate of Completion." If the HMUPA inspector requires that an Unauthorized Release (leak) Report is required due to holes in the UST or odor or visual contamination, or if analytical results indicate there are elevated levels of contamination, the case will be referred to the Local Oversight Program for further action.

Hazards (Disposal of Contaminated Soil, Site Health and Safety Plan) *

If, based on the results of the soil tests conducted, the DPH determines that the soils on the project site are contaminated with contaminants at or above potentially hazardous levels, all contaminated soils designated as hazardous waste shall be excavated by a qualified Removal Contractor and disposed of at a regulated Class I, II, or III hazardous waste landfill in accordance with state and federal regulations, as stipulated in the Site Mitigation Plan. The Removal Contractor shall, as required, obtain, complete, and sign hazardous waste manifests to accompany the soils to the disposal site. Other excavated soils shall be disposed of in an appropriate landfill, as governed by applicable laws and regulations, or other appropriate actions shall be taken in coordination with the DPH.

If the DPH determines that the soils on the project site are contaminated with contaminants at or above potentially hazardous levels, a Site Health and Safety (H&S) Plan would be required by the California Division of OSHA prior to initiating any earth-moving activities at the site. The Site Health and Safety Plan shall identify protocols for managing soils during construction to minimize worker and public exposure to contaminated soils. The protocols shall include at a minimum:

- Sweeping of adjacent public streets daily (with water sweepers) if any visible soil material is carried onto the streets.
- Characterization of excavated native soils proposed for use on site prior to placement to confirm that the soil meets appropriate standards.
- The dust controls specified in the San Francisco Construction Dust Control Ordinance.
- Protocols for managing stockpiled and excavated soils.

The Site Health and Safety Plan shall identify site access controls to be implemented from the time of ground disturbance through the completion of earthwork construction. The protocols shall include at a minimum:

- Appropriate site security to prevent unauthorized pedestrian/vehicular entry, such as fencing or other barrier of sufficient height and structural integrity to prevent entry and based upon the degree of control required.
- Posting of “no trespassing” signs.
- Providing on-site meetings with construction workers to inform them about security measures and reporting/contingency procedures.

If groundwater contamination is identified, the Site Health and Safety Plan shall identify protocols for managing groundwater during construction to minimize worker and public exposure to contaminated groundwater. The protocols shall include procedures to prevent unacceptable migration of contamination from defined plumes during dewatering.

The Site Health and Safety Plan shall include a requirement that construction personnel be trained to recognize potential hazards associated with underground features that could contain hazardous substances, previously unidentified contamination, or buried hazardous debris. Excavation personnel shall also be required to wash hands and face before eating, smoking, and drinking.

The Site Health and Safety Plan shall include procedures for implementing a contingency plan, including appropriate notification and control procedures, in the event unanticipated subsurface hazards are

discovered during construction. Control procedures could include, but would not be limited to, investigation and removal of hazards.

Hazardous Building Materials (PCBs, Mercury, Lead and others) *

The project sponsor shall ensure that pre-construction building surveys for PCB- and mercury-containing equipment, hydraulic oils, fluorescent lights, lead, mercury and other potentially toxic building materials are performed prior to the start of demolition. Any hazardous building materials so discovered shall be abated according to federal, state, and local laws and regulations.

Hazardous Building Materials (Removal of Hydraulic Hoists)

Prior to removal of the hydraulic hoists on the site, the project sponsor shall apply for permits from the Hazardous Materials Unified Program Agency (HMUPA) and the San Francisco Fire Department. The project sponsor shall comply with all conditions of the permits issued by the HMUPA and Fire Department for the proposed project.

B. IMPROVEMENT MEASURES

Improvement measures diminish project effects that the environmental analysis found to be less than significant. These measures are listed below.

IMPROVEMENT MEASURE 1

Transportation (Loading)

Occasionally a large semi tractor-trailer may be used during move-in or move-out of the residential units. These vehicles could not be accommodated in the proposed on-site loading space and would have to use Tenth Street. This activity would be restricted to weekends only in order to avoid conflicts with vehicular and pedestrian traffic in the area.

Transportation (Construction)

Any construction traffic occurring between 7:00 a.m. and 9:00 a.m. or between 3:30 p.m. and 6:00 p.m. would coincide with peak hour traffic and could impede traffic flow. The impact of lane closures and construction traffic would decrease the capacity of streets and slow the movement of traffic (including Muni and other buses). During the a.m. peak period on one-way, southbound Tenth Street, and during off-peak period, traffic volumes may accommodate construction vehicles without substantial delay to

traffic. To the extent possible, the proposed project would limit truck movements to the hours before 3:30 p.m. Prior to any lane closure and encroachment on traffic lanes, proper permits must be obtained from the City. The project sponsor and construction contractor(s) would meet with the SFMTA, the Fire Department, and the Planning Department to determine feasible traffic mitigation measures to reduce traffic congestion and pedestrian circulation impacts during construction of the project. In addition, to ensure that construction activities do not impact Muni bus stops or routes in the area, the project sponsor would coordinate with Muni's Chief Inspector prior to construction.

V. OTHER CEQA ISSUES

This chapter discusses other CEQA-required topics, including growth inducement, greenhouse gas emissions, significant and unavoidable environmental effects of the proposed project, and areas of controversy and issues to be resolved.

A. GROWTH INDUCEMENT

A project would be growth inducing if (1) its construction and use would encourage a substantial population increase; (2) it would indirectly stimulate new development that would not occur without the proposed project; and (3) it would involve new infrastructure (such as water or sewer utilities) with capacity to serve other projects. The proposed infill project's 117 residential units and 2,742 sq.ft. of ground-floor retail/personal services space would increase the daily population on the vacant project site by approximately 222 residents and 11 net new employees (13 total employees). The induced growth of the proposed project in San Francisco and the region would not exceed the growth anticipated in ABAG's regional forecasts of employment and population growth. Some future residents of the proposed project may move to San Francisco from other parts of the Bay Area to be closer to their employment, while other may relocate within the City. To the extent that in-migration occurs, the proposed project would be expected to reduce commutes to the City. The proposed project would occur in an already urbanized area in San Francisco; it would not result in the extension of utilities or roads into undeveloped areas, and would not directly lead to substantial development outside the City. For these reasons, the proposed project would not cause significant growth-inducing impacts.

B. GREENHOUSE GAS EMISSIONS

The Initial Study (see Appendix A) determined that all air quality impacts of the previously proposed 16-story project would be mitigated to a less-than-significant level (therefore, the air quality impacts of the currently proposed 14-story project also would be mitigated), and that the EIR will provide a quantitative greenhouse gas (GHG) analysis for informational purposes.

There are limitations to the current state of the art to link calculated greenhouse gas emissions of individual projects and the predicted environmental changes that could be caused by global temperature increases. For example, the Intergovernmental Panel on Climate Change has stated that “difficulties remain in attributing temperature on smaller than continental scales and over time scales of less than 50 years. Attribution at these scales, with limited exceptions, has not yet been established.”⁴⁸ Therefore, the issue of global climate change is inherently a cumulative issue as the greenhouse gas emissions of individual projects cannot be shown to have any material effect on global climate, and this section discusses the potential contribution of the proposed project to cumulative greenhouse gas emissions.

SETTING

Global Climate Change

Global climate change refers to the change in the average weather of the earth that may be measured by changes in wind patterns, storms, precipitation, and temperature. Projected climate changes could impact California’s public health through changes in air quality, weather-related disasters, and a possible increase in infectious disease. The baseline by which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. Many of the recent concerns over global climate change use this data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude, as determined by ice cores thousands of years old.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of greenhouse gas emissions needed to stabilize global temperatures and climate change impacts. The IPCC predicted that the range of global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1°C to 6.4°C. Regardless of analytical methodology, global average temperature and sea level are expected to rise under all scenarios.⁴⁹

This assessment makes it clear that the impacts of future climate change will be mixed across regions. For example, according to the IPCC Fourth Assessment report, there may be large differences in regional

⁴⁸ Intergovernmental Panel on Climate Change, 2007. G.C. Hegerl, “Understanding and Attributing Climate Change” Chapter 9, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Similarly, the 2005 report of the National Research Council entitled *Radiative Forcing of Climate Change: Expanding the Concept and Addressing Uncertainties* states that the mechanisms involved in land-atmosphere interactions “are not well understood, let alone represented in climate models.”

⁴⁹ Intergovernmental Panel on Climate Change, 2007. R.B. Alley et al. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Summary for Policymakers.

population, income and technological development under alternative scenarios, which are often a strong determinant of the level of vulnerability to climate change. To illustrate, in a number of recent studies of global impacts of climate change on food supply, risk of coastal flooding and water scarcity, the projected number of people potentially affected is considerably greater in areas characterized by relatively low per capita income and large population growth. This difference is largely explained, not by differences in changes of climate, but by differences in vulnerability.⁵⁰

“Greenhouse Gas” Emissions

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHG's has been implicated as a driving force for global climate change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and anthropogenic activities that alter the composition of the global atmosphere.

Individual projects contribute to the cumulative effects of climate change by emitting GHGs during demolition, construction and operational phases. The principal GHGs are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. (Ozone—not directly emitted, but formed from other gases—in the troposphere, the lowest level of the earth's atmosphere, also contributes to retention of heat.) While the presence of the primary GHGs in the atmosphere are naturally occurring, carbon dioxide (CO₂), methane, and nitrous oxide (N₂O) are largely emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Carbon dioxide is the “reference gas” for climate change, meaning that emissions of GHGs are typically reported in “carbon dioxide-equivalent” measures. Emissions of carbon dioxide are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs, with much greater heat-absorption potential than carbon dioxide, include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming, although there is uncertainty concerning the magnitude and rate of the warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires,

⁵⁰ Ibid.

and more drought years.⁵¹ Secondary effects are likely to include global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

The California Energy Commission (CEC) estimated that in 2004 California produced 500 million gross metric tons (about 550 million U.S. tons) of carbon dioxide-equivalent GHG emissions.⁵² The CEC found that transportation is the source of 38 percent of the State's GHG emissions, followed by electricity generation (both in-state and out-of-state) at 23 percent and industrial sources at 13 percent.⁵³ In the Bay Area, fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of the Bay Area's GHG emissions, accounting for just over half of the Bay Area's 85 million tons of GHG emissions in 2002. Industrial and commercial sources were the second largest contributors of GHG emissions with about one-fourth of total emissions. Domestic sources (e.g., home water heaters, furnaces, etc.) account for about 11 percent of the Bay Area's GHG emissions, followed by power plants at 7 percent. Oil refining currently accounts for approximately 6 percent of the total Bay Area GHG emissions.⁵⁴

Statewide Actions

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which sets forth a series of target dates by which statewide emission of greenhouse gases (GHG) would be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.⁵⁵

⁵¹ California Air Resources Board (ARB), 2006a. Climate Change website (<http://www.arb.ca.gov/cc/120106workshop/intropres12106.pdf>) accessed December 4, 2007.

⁵² Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

⁵³ California Energy Commission, Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004 -Final Staff Report, publication # CEC-600-2006-013-SF, December 22, 2006; and January 23, 2007 update to that report. Available on the internet at: <http://www.arb.ca.gov/cc/ccci/emsinv/emsinv.htm>.

⁵⁴ BAAQMD, Source Inventory of Bay Area Greenhouse Gas Emissions: Base Year 2002, November 2006. Available on the internet at: http://www.baaqmd.gov/pln/ghg_emission_inventory.pdf.

⁵⁵ There are 12 exceptions to this requirement (e.g., emergency situations, military, adverse weather conditions, etc.), including: when a vehicle's power takeoff is being used to run pumps, blowers, or other equipment; when a vehicle is stuck in traffic, stopped at a light, or under direction of a police officer; when a vehicle is queuing beyond 100 feet from any restricted area; or when an engine is being tested, serviced, or repaired.

In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32; California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), which requires the California Air Resources Board (CARB) to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

AB 32 establishes a timetable for the CARB to adopt emission limits, rules, and regulations designed to achieve the intent of the Act. CARB staff is preparing a scoping plan to meet the 2020 greenhouse gas reduction limits outlined in AB 32. In order to meet these goals, California must reduce their greenhouse gases by 30 percent below projected 2020 business as usual emissions levels, or about 10 percent from today's levels. In June 2008, CARB released their Draft Scoping Plan, which estimates a reduction of 169 million metric tons of CO₂-eq (MMTCO₂-eq). Approximately one-third of the emissions reductions strategies fall within the transportation sector and include the following: California Light-Duty Vehicle GHG standards, the Low Carbon Fuel Standard, Heavy-Duty Vehicle GHG emission reductions and energy efficiency, and medium and heavy-duty vehicle hybridization, high speed rail, and efficiency improvements in goods movement. These measures are expected to reduce GHG emissions by 60.2 MMTCO₂-eq. Emissions from the electricity sector are expected to reduce another 49.7 MMTCO₂-eq. Reductions from the electricity sector include building and appliance energy efficiency and conservation, increased combined heat and power, solar water heating (AB 1470), the renewable energy portfolio standard (33% renewable energy by 2020), and the existing million solar roofs program. Other reductions are expected from industrial sources, agriculture, forestry, recycling and waste, water, and emissions reductions from cap-and-trade programs. Local government actions and regional GHG targets are also expected to yield a reduction of 2 MMTCO₂-eq. Measures that could become effective during implementation pertain to construction-related equipment and building and appliance energy efficiency. Some proposed measures will require new legislation to implement, some will require subsidies, some have already been developed, and some will require additional effort to evaluate and quantify. Additionally, some emissions reductions strategies may require their own environmental review under CEQA or the National Environmental Policy Act (NEPA). Applicable measures that are ultimately adopted will become effective during implementation of proposed project and the proposed project could be subject to these requirements, depending on the proposed project's timeline.

Local Actions

San Francisco has a history of environmental protection policies and programs aimed at improving the quality of life for San Francisco's residents and reducing impacts on the environment. The following plans, policies and legislation demonstrate San Francisco's continued commitment to environmental protection.

Transit First Policy. In 1973, San Francisco instituted the Transit First Policy, which added Section 16.102 to the City Charter with the goal of reducing the City's reliance on freeways and meeting transportation needs by emphasizing mass transportation. The Transit First Policy gives priority to public transit investments; adopts street capacity and parking policies to discourage increased automobile traffic; and encourages the use of transit, bicycling and walking rather than use of single-occupant vehicles.

San Francisco Sustainability Plan. In July 1997 the Board of Supervisors approved the Sustainability Plan for the City of San Francisco establishing sustainable development as a fundamental goal of municipal public policy.

The Electricity Resource Plan (Revised December 2002). San Francisco adopted the Electricity Resource Plan to help address growing environmental health concerns in San Francisco's southeast community, home of two power plants. The plan presents a framework for assuring a reliable, affordable, and renewable source of energy for the future of San Francisco.

The Climate Action Plan for San Francisco. In February 2002, the San Francisco Board of Supervisors passed the Greenhouse Gas Emissions Reduction Resolution (Number 158-02) committing the City and County of San Francisco to a GHG emissions reduction goal of 20 percent below 1990 levels by the year 2012. In September 2004, the San Francisco Department of the Environment and the Public Utilities Commission published the Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Emissions.⁵⁶ The Climate Action Plan provides the context of climate change in San Francisco and examines strategies to meet the 20 percent greenhouse gas reduction target. Although the Board of Supervisors has not formally committed the City to perform the actions addressed in the Plan, and many of the actions require further development and commitment of resources, the Plan serves as a blueprint for GHG emission reductions, and several actions are now in progress.

⁵⁶ San Francisco Department of the Environment and San Francisco Public Utilities Commission, *Climate Action Plan for San Francisco, Local Actions to Reduce Greenhouse Emissions*, September 2004.

LEED Silver for Municipal Buildings. In 2004, the City amended Chapter 7 of the Environment code, requiring all new municipal construction and major renovation projects to achieve LEED Silver Certification from the US Green Building Council.

Zero Waste. In 2004, the City of San Francisco committed to a goal of diverting 75 percent of its' waste from landfills by 2010, with the ultimate goal of zero waste by 2020. San Francisco currently recovers 69 percent of discarded material.

Construction and Demolition Debris Recovery Ordinance. In 2006 the City of San Francisco adopted Ordinance No. 27-06, requiring all construction and demolition debris to be transported to a registered facility that can divert a minimum of 65% of the material from landfills. This ordinance applies to all construction, demolition and remodeling projects within the City.

Greenhouse Gas Reduction Ordinance. In May 2008, the City of San Francisco adopted an ordinance amending the San Francisco Environment Code to establish City greenhouse gas emission targets and departmental action plans, to authorize the Department of the Environment to coordinate efforts to meet these targets, and to make environmental findings. The ordinance establishes the following greenhouse gas emission reduction limits for San Francisco and the target dates to achieve them:

- Determine 1990 City greenhouse gas emissions by 2008, the baseline level with reference to which target reductions are set;
- Reduce greenhouse gas emissions by 25 percent below 1990 levels by 2017;
- Reduce greenhouse gas emissions by 40 percent below 1990 levels by 2025; and
- Reduce greenhouse gas emissions by 80 percent below 1990 levels by 2050.

The ordinance also specifies requirements for City departments to prepare departmental Climate Action Plans that assess, and report to the Department of the Environment, GHG emissions associated with their department's activities and activities regulated by them, and prepare recommendations to reduce emissions. As part of this, the San Francisco Planning Department is required to: (1) update and amend the City's applicable General Plan elements to include the emissions reduction limits set forth in this ordinance and policies to achieve those targets; (2) consider a project's impact on the City's GHG reduction limits specified in this ordinance as part of its review under CEQA; and (3) work with other City departments to enhance the "transit first" policy to encourage a shift to sustainable modes of transportation thereby reducing emissions and helping to achieve the targets set forth by this ordinance.

Go Solar SF. On July 1, 2008, the San Francisco Public Utilities Commission (SFPUC) launched their “GoSolarSF” program to San Francisco’s businesses and residents, offering incentives in the form of a rebate program that could pay for approximately half the cost of installation of a solar power system, and more to those qualifying as low-income residents.

The City has also passed ordinances to reduce waste from retail and commercial operations. Ordinance 295-06, the Food Waste Reduction Ordinance, prohibits the use of polystyrene foam disposable food service ware and requires biodegradable/compostable or recyclable food service ware by restaurants, retail food vendors, City Departments and City contractors. Ordinance 81-07, the Plastic Bag Reduction Ordinance, requires stores located within the City and County of San Francisco to use compostable plastic, recyclable paper and/or reusable checkout bags.

The San Francisco Planning Department and Department of Building Inspection have also developed a streamlining process for Solar Photovoltaic (PV) Permits and priority permitting mechanisms for projects pursuing LEED Gold Certification.

Each of the policies and ordinances discussed above include measures that would decrease the amount of greenhouse gases emitted into the atmosphere and decrease San Francisco’s overall contribution to climate change.

Existing Site Emissions

The proposed project would replace a one-story commercial building and surface parking lot, currently used as a parking facility. Air emissions from the current use are generated by stationary sources, such as heating, ventilation, and air-conditioning (HVAC) equipment, and mobile sources, principally motor vehicle trips. Motor vehicles are the primary source of air pollutant emissions associated with the existing use on the project site. For the purposes of this report, calculations of the proposed project’s contribution of greenhouse gases does not take into account the demolition of the existing use on site.

IMPACTS

Significance Criteria

Although neither the BAAQMD nor any other agency has adopted significance criteria for evaluating a project’s contribution to climate change, OPR has asked the California Air Resources Board to “recommend a method for setting thresholds of significance to encourage consistency and uniformity in

the CEQA analysis of GHG emissions” throughout the state because OPR has recognized that “the global nature of climate change warrants investigation of a statewide threshold for GHG emissions.”⁵⁷ In the interim, the Office of Planning and Research (OPR) released a Technical Advisory for addressing climate change through CEQA review on June 19, 2008. OPR’s technical advisory offers informal guidance on the steps that lead agencies should take to address climate changes in their CEQA documents, in the absence of statewide thresholds. OPR will develop, and the California Resources Agency will certify and adopt amendments to the CEQA guidelines on or before January 1, 2010, pursuant to Senate Bill 97.

The informal guidelines in OPR’s technical advisory provide the basis for determining proposed project’s contribution of greenhouse gas emissions and the project’s contribution to global climate change. In the absence of adopted statewide thresholds, OPR recommends the following approach for analyzing greenhouse gas emissions:

- 1) Identify and quantify the project’s greenhouse gas emissions;
- 2) Assess the significance of the impact on climate change; and
- 3) If the impact is found to be significant, identify alternatives and/ or mitigation measures that will reduce the impact to levels below significance.

Impact Analysis

The Initial Study (see Appendix A) determined that the proposed project’s air quality impacts would be reduced to a less-than-significant level. However, the Initial Study also determined that the EIR would provide a quantitative GHG analysis for informational purposes.

The following analysis is based on OPR’s recommended approach for determining a project’s contribution to and impact on climate change.

Identifying and quantifying a project’s greenhouse gas emissions. OPR’s technical advisory states that “the most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide.” State law defines GHG to also include hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. These latter GHG compounds are usually emitted in industrial processes, and therefore not applicable to the proposed project, however, the GHG calculation does include emissions from CO₂, N₂O, and CH₄, as recommended by OPR. The informal guidelines also advise that lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water usage and

⁵⁷ Governor’s Office of Planning and Research. *Technical Advisory- CEQA and Climate Change: Addressing Climate Change to the California Environmental Quality Act (CEQA) Review*. June 19, 2008. This document is available online at the Office of Planning and Research’s website at: www.opr.gov. Accessed 07/24/2008.

construction activities. The calculation presented below includes “one-time” construction emissions in terms of CO₂⁵⁸, and annual CO₂-eq GHG emissions from increased vehicular traffic, energy consumption, as well as estimated GHG emissions from solid waste disposal. While San Francisco’s population and businesses are expected to increase, overall projected water demand for San Francisco in 2030 is expected to decrease from current water demand due to improvements in plumbing code requirements and additional water conservation measures implemented by the San Francisco Public Utilities Commission (SFPUC).⁵⁹ Given the anticipated degree of water conservation, GHG emissions associated with the transport and treatment of water usage would similarly decrease through 2030, and therefore increased GHG emissions from water usage is not expected.

The proposed project would increase the activity on-site by demolishing an approximately 5,000-sq.ft. commercial building and surface parking lot, and constructing a new building to include 117 residential units, 2,742 sq.ft. of commercial use, and 100 sq.ft. of office use. Therefore, the proposed project would contribute to long-term increases in GHGs as a result of traffic increases (mobile sources) and residential and commercial operations associated with heating, energy use and solid waste disposal (area sources). Direct project emissions of carbon dioxide equivalents (CO₂-eq) (including CO₂, NO_x, and CH₄ emissions) include 286 tons of CO₂-eq/year from transportation and 345 tons of CO₂-eq/year from heating, for a total of 631 tons of CO₂-eq/year of directly emitted GHGs. The project would also indirectly result in GHG emissions from off-site electricity generation at power plants (approximately 226 tons of CO₂-eq/year) and from anaerobic decomposition of solid waste disposal at landfills, mostly in the form of methane (approximately 125 tons of CO₂-eq/year), for a GHG emissions total of approximately 981 tons of CO₂-

⁵⁸ Construction emissions of carbon dioxide (CO₂) were calculated based on URBEMIS 2007 9.2.4 software. Attachment 2 of the Office of Planning and Research’s Technical Advisory- CEQA and Climate Change: Addressing Climate Change to the California Environmental Quality Act (CEQA) Review, (June 19, 2008) lists and describes modeling tools used to calculate greenhouse gas emissions. URBEMIS is currently the only tool identified that has the capacity to calculate a project’s CO₂ emissions from construction activities. It does not, however, calculate emissions from N₂O or CH₄, nor does any other modeling tool currently available. However emissions of these compounds would be a fraction of the total greenhouse gas emissions and therefore CO₂ is used as an indicator to estimate the construction-related emissions of the proposed project.

⁵⁹ The San Francisco Public Utilities Commission’s (SFPUC) *City and County of San Francisco Retail Water Demands and Conservation Potential*, November 2004, documents the current and projected water demand given population and housing projections from Citywide Planning. This document is available at the SFPUC’s website at: http://sfwater.org/detail.cfm/MC_ID/13/MSD_ID/165/C_ID/2281. Accessed 07/28/2008. The analysis provides projections of future (2030) water demand given anticipated water conservation measures from plumbing code changes, measures the SFPUC currently implements, and other measures the SFPUC anticipates on implementing. Conservation measures the SFPUC currently implements results in an overall reduction of 0.64 million gallons of water per day (mgd).

eq/year. This represents approximately 0.0011 percent of total Bay Area GHGs emitted in 2002.⁶⁰ In addition to GHG emissions from project operations, construction of the proposed project is expected to generate approximately 1,462 tons of CO₂ over the construction period, which represents approximately 0.0017 percent of Bay Area total GHGs emitted in 2002.

Assessing the significance of the impact on climate change. The project's incremental increases in GHG emissions associated with construction, traffic increases and residential/commercial heating, electricity use, and solid waste disposal would contribute to regional and global increases in GHG emissions and associated climate change effects.

OPR encourages public agencies to adopt thresholds of significance, but notes that public agencies are not required to do so. Until a statewide threshold has been adopted, the Department analyzes a proposed project's contribution to climate change against the following criteria:

Does the project conflict with the state goal of reducing GHG emissions in California to 1990 levels by 2020, as set forth by the timetable established in AB 32 (California Global Warming Solutions Act of 2006), such that the project's GHG emissions would result in a substantial contribution to global climate change.

The 2020 GHG emissions limit for California, as adopted by CARB in December of 2007 is approximately 427 MMTCO₂-eq. The proposed project's annual contribution would be negligible in comparison to the State's 2020 emissions limit, and therefore the proposed project would not generate sufficient emissions of GHGs to contribute considerably to the cumulative effects of GHG emissions such that it would impair the state's ability to implement AB32, nor would the proposed project conflict with San Francisco's local actions to reduce GHG emissions.

OPR's guidance states that "Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. CEQA authorizes reliance on previously approved plans and mitigation programs that have adequately analyzed and mitigated GHG emissions to a less-than-significant level as a means to avoid or substantially reduce the cumulative impact of a project" And "In determining whether a proposed project's emissions are cumulatively considerable, the lead agency must consider the impact of the project when viewed in connection with the effects of "past, current and probable future projects."

⁶⁰ The Bay Area Air Quality Management District reported regional Bay Area GHGs emissions in 2002 at approximately 85 million CO₂-eq tons.

As discussed previously, San Francisco has been actively pursuing cleaner energy, transportation and solid waste policies. Probable future greenhouse gas reductions will be realized by implementation of state and local green building codes. On July 17, 2008 California became the first state to approve a Green Building Code that would cut energy usage by 15 percent, water use by 20%, and water for landscaping by 50 percent. The green building standards are expected to become effective on July 1, 2009, and while voluntary, mandatory requirements may be in place by as early as 2010. In addition, San Francisco has passed its own green building ordinance, which added Chapter 13C to the San Francisco Building Code. Building permits filed after November 3, 2008, are subject to the green building ordinance, which requires most new construction and major alternations to comply with green building standards. San Francisco's green building ordinance is expected to realize the following environmental benefits:

| | |
|---|--|
| CO ₂ Reductions | 60,000 tons of CO ₂ emissions |
| Energy Savings | 220,000 Megawatt hours of power |
| Drinking Water Saving | 100 million gallons of water |
| Wastewater and Stormwater Reductions | 90 million gallons of water |
| Construction and Demolition Waste Reduction | 700 million pounds |
| Increased Recycled Materials Valuations | 200 million dollars |
| Reduced Automobile Trips | 540,000 auto trips |
| Increased Green Power Generation | 37,000 megawatt hours |

Additionally, the recommendations outlined in the Draft AB 32 scoping plan will likely realize major reductions in vehicle emissions.

Further, the State of California Attorney General's office has compiled a list of greenhouse gas reduction measures that could be applied to a diverse range of projects.⁶¹ The proposed project would meet the intent of many of the greenhouse gas reduction measures identified by the Attorney General's office: (1) As infill development, the project would be constructed in an urban area with good transit access, reducing vehicle trips and vehicle miles traveled, and therefore the project's transportation-related GHG emissions would tend to be less relative to the same amount of population and employment growth elsewhere in the Bay Area, where transit service is generally less available than in the central city of San Francisco;⁶² (2) As new construction, the proposed project would be required to meet California Energy

⁶¹ State of California, Department of Justice, "The California Environmental Quality Act: Addressing Global Warming Impacts at the Local Agency Level." Updated 3/11/08. Available at: http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf. Accessed 04/11/2008.

⁶² The California Air Pollution Control Officer's, *CEQA and Climate Change* (January 2008) white paper identifies infill development as yielding a "high" emissions reduction score (between 3-30%). This paper is available online at: <http://www.capcoa.org/ceqa/CAPCOA%20White%20Paper%20-%20CEQA%20and%20Climate%20Change.pdf>. Accessed April 15, 2008.

Efficiency Standards for Residential and Nonresidential Buildings, helping to reduce future energy demand as well as reduce the project's contribution to cumulative regional GHG emissions; (3) the proposed project would also be required to comply with the Construction Demolition and Debris Recovery Ordinance (Ordinance No. 27-06), requiring at least 65% of all construction and demolition material to be diverted from landfills; and (4) the proposed project would plant approximately seven street trees, regulating outdoor temperatures and aiding in carbon sequestration.⁶³

Given that: (1) the proposed project would not emit a substantial amount of greenhouse gases; (2) the proposed project would not contribute significantly to global climate change such that it would impede the State's ability to meet its greenhouse gas reduction targets under AB 32; and (3) past, current and probable future state and local greenhouse gas reduction measures have reduced and will continue to reduce a project's contribution to climate change, the proposed project would not contribute significantly, either individually or cumulatively, to global climate change.

C. SIGNIFICANT UNAVOIDABLE EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

In accordance with CEQA, this section identifies environmental impacts that mitigation measures could not eliminate or reduce to an insignificant level as described in Chapter IV: Mitigation and Improvement Measures, pages 131 through 138 (CEQA Statutes Section 21100(b)(2)(A), and CEQA Guidelines Section 15126.2). This chapter is subject to final determination by the Planning Commission as part of its certification of the EIR, and staff will revise it to reflect the findings of the Planning Commission, if necessary.

No significant project-specific or cumulative impacts that could not be eliminated or reduced to an insignificant level by mitigation measures have been identified.

With implementation of the mitigation measures outlined in Chapter IV: Mitigation and Improvement measures of this report, all potential significant impacts would be reduced to a less-than-significant level.

⁶³ Carbon sequestration is the capture and long-term storage of carbon dioxide before it is emitted into the atmosphere.

D. AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This Draft EIR assesses the significance of cumulative land use, cumulative aesthetics, transportation, traffic noise, air quality, wind, and shadow impacts. The Initial Study (see Appendix A) found that all other environmental effects would be less than significant, in some cases with required mitigation measures and in other cases improvement measures were identified for impacts that were found to be less than significant, to which the project sponsor has agreed to incorporate into the proposed project.

On May 19, 2006, the Planning Department issued a "Notification of Project Receiving Environmental Review," and on December 29, 2007, it issued a "Notice of Preparation of an Environmental Impact Report" For the 1415 Mission Street property. Recipients of these notices included owners of properties within 300 feet of the project site, tenants of properties adjacent to the site, and other potentially interested parties including neighborhood groups and various state and regional agencies. Concerns and issues raised by the public regarding the environmental review were addressed in the Initial Study and/or were included in this EIR where appropriate, as indicated below (in parentheses).

Commenters raised the following concerns:

- Concern about the height, context and scale of proposed project, neighborhood character, and residential density (see Land Use and Zoning, page 53, Aesthetics, page 62, and Initial Study, page 30)
- Concern about blockage of views (see Aesthetics, page 62, and Initial Study, page 37)
- Concern about transit, traffic, and bicycle facilities (see Transportation, page 75)
- Concern about construction noise (see Initial Study, page 48)
- Concern about wind (see Wind, page 110)
- Concern about blockage of air and light (see Shadow, page 122)
- Concern about effect on parks and open space (see Initial Study, page 58)

Following publication of the Draft EIR, there will be a period of formal public comment on the adequacy and accuracy of the Draft EIR, with a public hearing before the Planning Commission. Public comments regarding the environmental review of the proposed project are encouraged during the comment period and should be mailed to the San Francisco Planning Department, attention: Bill Wycko, Environmental Review Officer, 1415 Mission Street Mixed Use Development Project, 1650 Mission Street, Suite 400, San Francisco, California 94103. Following the comment period, a Comments and Responses document will be prepared that includes all comments submitted at the hearing or in writing during this period, contains written responses to the comments, and specifies any changes to the DEIR. This document, together with the DEIR, will constitute the Final EIR (FEIR). The Planning Commission will decide on the adequacy and accuracy of the environmental analysis in its EIR certification hearing.

VI. ALTERNATIVES TO THE PROPOSED PROJECT

This chapter identifies alternatives to the proposed project and discusses potential environmental impacts associated with each alternative, as well as discussing alternatives that were considered and rejected. Project decision-makers could approve any of the following alternatives instead of the proposed project if the alternative would attain most of the project sponsor's objectives, would be feasible, and would avoid or substantially lessen any of the project's significant impacts. The determination of feasibility will be made by project decision-makers based on substantial evidence in the record, which shall include, but is not limited to, information presented in this Draft EIR and comments received on it.

In development of the project, alternatives were identified, besides the No Project Alternative, that could reduce the impacts of the proposed project. These alternatives are identified below:

- Under the CEQA-required No-Project Alternative, there would be no change on the project site and no environmental impacts.
- The Existing Zoning Alternative would comply with the current Heavy Commercial (C-M) Use district and 130-L Height and Bulk district, which would permit a mixed-use building up to 130 feet in height, with a maximum of 57 dwelling units and up to 102,816 gross sq.ft. of floor area, including 2,742 sq.ft. of commercial space. It would contain 57 parking spaces in two subterranean levels. It should be noted that residential density restrictions, rather than architectural concerns, would determine the building envelope of this alternative, and it would be eight stories in height as opposed to the maximum permitted height.
- The Reduced Scale Alternative would be eight stories in height, with 78 residential units, 2,742 sq.ft. of ground-floor commercial space and a two-level parking garage with up to 39 independently-accessible, or 68 valet parking residential spaces, compared to the proposed project's 14-story building with 117 residential units, 46 independently accessible or 101 valet residential parking spaces, and 2,742 sq.ft. of commercial space.

These alternatives take into consideration the comments made on the Notification of Project Receiving Environmental Review and the Notice of Preparation of an Environmental Impact Report, and reflect the intention of the Planning Department to select alternatives that would reduce or avoid the potential environmental impacts of the project. Decision-makers could also consider other alternatives, but

additional environmental assessment may be required if the proposed uses differ substantially from the proposed project or the alternatives identified in this EIR.

A. ALTERNATIVE A: NO PROJECT

CEQA and the State CEQA Guidelines require EIRs to include a No Project Alternative so decision-makers can compare the effects of the proposed project with the effects of not approving a project.

DESCRIPTION

Alternative A, the No Project Alternative, would entail no changes to the project site. The existing one-story, 18-foot-tall, approximately 5,000-sq.ft. commercial building and paved surface parking lot on the property would remain. The proposed 14-story, approximately 130-foot-tall mixed use building with about 2,742 sq.ft. of ground-floor commercial space, 117 residential units on the upper floors, and a three-level subterranean garage, with up to 46 independently accessible, or 101 valet, residential parking spaces plus 15 commercial parking spaces, would not be constructed. This alternative would not preclude future proposals for redevelopment of the project site.

IMPACTS

If the No-Project Alternative were implemented, none of the proposed project's impacts discussed in the Initial Study and Chapter III, Environmental Setting and Impacts would occur, and none of the mitigation measures would be required. Project impacts that would be avoided include the following:

- The proposed project's 30 vehicle trips during the weekday p.m. peak hour would not be added to the road system. The project-generated but less-than-significant increases in delays at nearby intersections would not occur. The project's less-than-significant contributions (less than one percent) to the Mission/South Van Ness and Market/Van Ness intersections under 2020 cumulative conditions would be avoided, although it is expected that these intersections would deteriorate from LOS E to LOS F and LOS C to LOS E, respectively, without the proposed project.
- The proposed project's less-than-significant cumulative land use, aesthetic, and traffic noise impacts would be avoided.
- The proposed project's less-than-significant project-specific traffic noise and intersection air quality impacts would be avoided.
- The proposed project's greenhouse gas emissions would be avoided.
- The proposed project's less-than-significant shadow impact would not occur (the project would shade nearby streets and buildings, but would not shade public open space).

- The proposed project's less-than-significant project-specific and cumulative wind impacts would be avoided.
- No construction would occur, and therefore there would be no construction-related noise, air quality, or transportation impacts.
- This alternative would avoid the potential exposure to hazardous materials during building demolition.
- Similarly, without ground disturbance from construction of the foundation and three-level subterranean parking garage, this alternative would not affect archeological resources that may be present.

Less-than-significant effects described in the Initial Study (see Appendix A) would not occur with this alternative, including those in the areas of project-specific land use, project-specific aesthetics, population and housing, cultural resources (historic architectural), recreation, utilities and service systems, public services, biological resources, geology and soils, hydrology and water quality, hazardous materials, mineral and energy resources, and agriculture resources.

The No Project Alternative would not meet the objectives of the project sponsor, R & K Investments, to (1) construct a high-quality, cost-effective mixed-use commercial-residential building with up to 117 residential units in a South of Market location that is well-served by local and regional transit; (2) design a project that is intended to enhance the existing urban character of the area and anchors the prominent corner site with a building up to 130 feet tall; (3) convert the site into a dense residential development that will contribute to the City's supply of housing, including a substantial number of units of appropriate size for families; (4) improve neighborhood amenity through the provision of pedestrian-oriented commercial space; (5) efficiently provide on-site parking and loading to meet the needs of the project; (6) develop a project with minimal environmental disruption; (7) construct a high-quality residential development that produces a reasonable return on investment for the project sponsor; or (8) complete the project on schedule and within budget.

If the Planning Commission selected this alternative, a different development proposal might be submitted at a later date; that proposal would be subject to CEQA requirements.

B. ALTERNATIVE B: EXISTING ZONING

DESCRIPTION

The project site is within a Heavy Commercial (C-M) Use district and a 130-L Height and Bulk district. Residential uses are a conditionally allowed use in a C-M district at a density ratio not exceeding the number of dwelling units permitted in the nearest R district, provided that the maximum density ratio

shall in no case be less than that for a RM-4 (Residential, Mixed, High-Density) Use district. The nearest R district to the project site is Service/Light Industrial/Residential (SLR), located immediately east of the site. Both the SLR and RM-4 districts permit up to one dwelling unit per 200 sq.ft. of lot area. Thus, the permitted residential density at the project site is one unit per 200 sq.ft. of lot area, or 57 units for the 11,424-sq.ft. lot. The basic Floor Area Ratio (FAR) in the C-M district is 9.0:1 (*Planning Code* Table 124), or 102,816 gross sq.ft., with which the project would comply.

Alternative B, the Existing Zoning Alternative, would comply with existing zoning controls, and, unlike the proposed project, would not require a Zoning Map Amendment to reclassify the project site from C-M to C-3-G, Conditional Use authorization for dwelling-unit density, a Variance for dwelling unit exposure or exceedance of the wind hazard criterion, or exceptions to the rear yard and off-street parking requirements. Under existing zoning, the building could be a maximum of 130 feet in height, with a maximum of 57 dwelling units and 128,520 gross sq.ft. of floor area. However, with only 57 residential units compared to the proposed project's 117, the Existing Zoning Alternative would not be built to the maximum building envelope permitted on the site. This alternative would demolish the existing building and remove the surface parking lot (as the proposed project would), and construct a mixed-use building of approximately eight stories and 75 feet in height. Total building area would be approximately 101,750 sq.ft., or approximately 40 percent less than the approximate 168,194-sq.ft. proposed project. This building would have 2,742 sq.ft. of commercial space on the ground floor and a total of 57 residential units on the upper floors, compared to 2,742 sq.ft. of commercial space and 117 residential units under the proposed project. A subterranean parking garage would have two levels and 57 independently accessible residential spaces. No commercial parking would be required under the Existing Zoning Alternative.

IMPACTS

Compared to the proposed project, the Existing Zoning Alternative would have the following impacts:

- The approximately 51 percent reduction in residential units under this alternative would generate a corresponding reduction in vehicle trips. The Existing Zoning Alternative would result in smaller increases in delays at nearby intersections, although the impact on these intersections would be less than significant for both the proposed project and this alternative. Similarly, this alternative would make a smaller contribution to cumulative traffic, the contribution to cumulative traffic impacts of both the proposed project and this alternative would be less than significant. Under cumulative conditions, the level of service at the Mission/South Van Ness and Market/Van Ness intersections would deteriorate to unacceptable levels due to cumulative development without implementation of either this alternative or the proposed project.

- The reduction in trip generation with this alternative would be expected to generate less air pollution, fewer greenhouse gas emissions, and a smaller contribution to cumulative traffic noise impacts than the project.
- This alternative's lower building height (75 feet compared to 130 feet) would result in even less than the proposed project's less-than-significant shadow, aesthetic, and wind impacts.
- This alternative would have the same land uses as the proposed project, but with about one-third of the density of the project and less intensive land use impacts. It would not physically divide an established community, conflict with adopted land use plans, or substantially or adversely alter the vicinity's land use character.
- The alternative's eight-story building would increase development height on the project site similar to the proposed project. It would have less than the project's less-than-significant visual character impact as the proposed project on the project site and its surroundings, because it would be approximately 55 feet shorter. Like the proposed project, this alternative would not block scenic public views or vistas.
- The Existing Zoning Alternative's archeology, construction noise, construction air quality, and hazardous materials impacts would be the same or less than those of the proposed project and would require implementation of the mitigation measures identified in Chapter IV, Mitigation and Improvement Measures, page 131.

This alternative would have impacts similar to or reduced from the proposed project's less-than-significant impacts identified by the Initial Study in the areas of population and housing, historical architectural resources, air quality (other than construction emissions), recreation, utilities and service systems, public services, biological resources, geology and soils, hydrology and water quality, mineral and energy resources, and agricultural resources.

This alternative, unlike the project, would not require a Zoning Map Amendment to reclassify the project site from C-M to C-3-G, Conditional Use authorization for dwelling-unit density, a Variance for dwelling unit exposure or exceedance of the wind hazard criterion, or exceptions to the rear yard and off-street parking requirements. Conditional Use authorization would be required for residential use in a C-M Use district.

The Existing Zoning Alternative would partially meet the project sponsor's objectives to construct a high-quality mixed use commercial-residential building in the South of Market neighborhood. This alternative would meet other objectives of the project sponsor to design a project that is intended to enhance the existing urban character of the area and has minimal environmental disruption. However, this alternative would not meet the project sponsor's objective of a reasonable return on investment or the goal of anchoring the corner site with a visually prominent building.

C. ALTERNATIVE C: REDUCED SCALE

DESCRIPTION

Alternative C, the Reduced Scale Alternative, would demolish the existing building and remove the surface parking lot (as the proposed project would), and construct a smaller mixed use building of eight stories and approximately 75 feet in height. This building would have 2,742 sq.ft. of commercial space on the ground floor, and 78 residential units on the upper floors. Total building area would be approximately 101,750 sq.ft., or approximately 40 percent less than the approximate 168,194-sq.ft. proposed project. A smaller subterranean parking garage would have approximately two levels, with up to 39 independently accessible, or 68 valet parking spaces, compared to three levels with the proposed project.

IMPACTS

Compared to the proposed project, the Reduced Scale Alternative would have the following impacts:

- Since the proposed project's residential land use would be reduced by approximately 40 percent under this alternative, total trip generation would be reduced proportionately. The Reduced Scale Alternative would result in smaller increases in delays at nearby intersections, although the impact on these intersections would be less than significant for both the proposed project and this alternative. Similarly, this alternative would make a smaller contribution to cumulative traffic; the contribution to cumulative traffic impacts of both the proposed project and this alternative would be less than significant. Under cumulative conditions, the level of service at the Mission/South Van Ness and Market/Van Ness intersections would deteriorate to unacceptable levels without implementation of either this alternative or the proposed project.
- The reduction in trip generation would be expected to generate less air pollution, fewer greenhouse gas emissions, and a smaller contribution to cumulative traffic noise impacts.
- This alternative's lower building height (75 feet compared to 130 feet) would result in even less than the proposed project's less-than-significant shadow, aesthetic, and wind impacts.
- Since this alternative has the same land uses as the proposed project, it would have similar but somewhat less intensive less-than-significant land use impacts. It would not physically divide an established community, conflict with adopted land use plans, or substantially or adversely alter the vicinity's land use character.
- The alternative's eight-story building would increase development density and height on the project site less than the 14-story proposed project and would have less than the project's less-than-significant visual character impact as the proposed project on the project site and its surroundings, because it would be approximately 55 feet shorter. Like the proposed project, this alternative would not block scenic public views or vistas.

- The Reduced Scale Alternative's archeology, construction noise, construction air quality, and hazardous materials impacts would be the same or less than those of the proposed project and would require implementation of the mitigation measures identified in Chapter IV, Mitigation and Improvement Measures, page 131.

This alternative would have impacts similar to or less than the proposed project's less-than-significant impacts identified by the Initial Study in the areas of population and housing, historical architectural resources, air quality, recreation, utilities and service systems, public services, biological resources, geology and soils, and hydrology and water quality. Like the proposed project, this alternative would have no impact on mineral and energy resources, and agricultural resources.

The Reduced Scale Alternative would partially meet the project sponsor's objectives to construct a high-quality mixed use commercial-residential building in the South of Market neighborhood. This alternative would meet the other objectives of the project sponsor to design a project that is intended to enhance the existing urban character of the area and has minimal environmental disruption. However, this alternative would not meet the project sponsor's objective of a reasonable return on investment or the goal of anchoring the corner site with a visually prominent building.

D. ALTERNATIVES CONSIDERED AND REJECTED

As part of a complete discussion of alternatives to the project, CEQA requires that the EIR describe why certain alternatives were not selected for analysis. The following possible alternatives were considered for evaluation and not chosen for the reasons given:

OFF-SITE ALTERNATIVE

The proposed project consists of demolition of the existing one-story, 18-foot commercial building and surface parking lot on the site and construction of a 14-story, 130-foot-tall mixed use building. Whether property is owned or can reasonably be acquired by the project sponsor has a strong bearing on the feasibility of developing a project alternative at a different site. The project sponsor does not own any alternative sites in San Francisco. No viable alternative sites have been identified within San Francisco where the proposed project could be constructed that would meet most of the project sponsor's objectives and where the project's environmental impacts would be substantially lessened or avoided. Furthermore, even if a potential alternative site were available, it is likely that the environmental effects of a similar project at an alternative site would be generally comparable to the impacts of the proposed project at the proposed site. Therefore, an off-site alternative was considered and rejected.

MITIGATED ALTERNATIVE

The Initial Study (see Appendix A) determined that a Mitigated Alternative, in which the project would be modified to reduce wind impacts and other potentially significant impacts of the proposed project, would be evaluated in the EIR. As discussed in III. Environmental Setting and Impacts, page 53, all project-specific and cumulative impacts of the proposed project, including wind effects, would be reduced to a less-than-significant level with implementation of mitigation measures identified in IV. Mitigation and Improvement Measures, page 131.

Because the proposed project would not have any significant project-specific or cumulative impacts, a Mitigated Alternative is not needed to reduce impacts to a less-than-significant level. Therefore, a Mitigated Alternative was rejected. Two other alternatives to the proposed project, the Existing Zoning Alternative and the Reduced Scale Alternative, are evaluated in this EIR.

E. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As discussed above, the project would not cause a project-specific or cumulative significant impact. Alternative B, the Existing Zoning Alternative, would be the environmentally superior alternative, because it would have even less physical impacts than the proposed project.

VII. EIR PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

EIR Authors

Planning Department, City and County of San Francisco
Major Environmental Analysis
1650 Mission Street, Suite 400
San Francisco, CA 94103

Environmental Review Officer: Bill Wycko
EIR Supervisor: Nannie Turrell
EIR Coordinators: Sue Mickelsen, Jessica Range, Carol Roos
Transportation Planner: Bill Wycko
Archeology: Randall Dean

Office of the City Attorney, City and County of San Francisco
City Hall, Room 234
One Dr. Carlton B. Goodlett Place
San Francisco, CA 94102
Deputy City Attorney: Elaine Warren

Department of Public Health
1390 Market Street, Suite 210
Rajiv Bhatia
Thomas Rivard
Stephanie Cushing
Scott Nakamura

EIR Consultants

DURING ASSOCIATES

120 Montgomery Street, Suite 2290
San Francisco, CA 94104
Stu During, Project Manager
Scott Edmondson
Michael Kent
Morgan Gillespie

ENVIRONMENTAL CONSULTANTS *(CONTINUED)*

DON BALLANTI **(WIND AND GREENHOUSE GAS ANALYSIS)**

Certified Meteorologist
1424 Scott Street
El Cerrito, CA 94530
Don Ballanti

ROWAN, WILLIAMS, DAVIES & IRWIN INC. **(WIND ANALYSIS)**

650 Woodlawn Road West
Guelph, Ontario, Canada N1K 1B8
B. Waechter, Project Director
A. Belanger, Project Manager
A. Akomah, M.E.Sc., Project Engineer

TREADWELL & ROLLO **(GEOTECHNICAL AND HAZARDOUS MATERIALS ANALYSIS)**

555 Montgomery Street
Suite 1300
San Francisco, CA 94111
Chris Yu Boon Tan
John Gouchon
Michael Chendorian
Peter Cusack
Philip G. Smith

CLEMENT DESIGNS **(GRAPHICS DESIGN)**

358 Third Avenue, Suite 100
San Francisco, CA 94118
Kathy Clement

CHS CONSULTING GROUP **(TRANSPORTATION)**

130 Sutter Street, Suite 468
San Francisco, CA 94104
Chi-Hsin Shao
Byung Lee

SQUARE ONE PRODUCTIONS **(PHOTOMONTAGES)**

1736 Stockton Street, Studio 7
San Francisco, California 941334
Hartmut Gerdes, Principal

Project Sponsor

R & K INVESTMENTS
Attn: Steven Kay
2106 Jackson Street, #3
San Francisco, CA 94115

Project Attorney

REUBEN & JUNIUS, LLP
One Bush Street, Suite 600
San Francisco, CA 94104
Daniel Frattin

Project Architect

HELLER MANUS ARCHITECTS
Attn: Clark Manus
221 Main Street, Suite 940
San Francisco, CA 94105

PAGE INTENTIONALLY LEFT BLANK

VIII. APPENDICES

Appendix A: Initial Study

Appendix B: Transportation Definitions

Appendix C: Wind

PAGE INTENTIONALLY LEFT BLANK

Appendix A

Initial Study

PAGE INTENTIONALLY LEFT BLANK



SAN FRANCISCO PLANNING DEPARTMENT

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT

1650 Mission St
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

| | | | |
|--------------------------------|--|----------------------------------|---------------------|
| Date of this Notice: | December 29, 2007 | | |
| Lead Agency: | San Francisco Planning Department 1650 Mission Street, Suite 400 San Francisco, California | | |
| Agency Contact Person: | Jessica Range, Environmental Planner | Telephone: | (415) 575-9018 |
| Project Title: | 2005.0540E: 1415 Mission Street Mixed-Use Development | | |
| Project Sponsor: | R & K Investments | | |
| Project Contact Person: | Daniel Frattin, Reuben & Junius, LLP | Telephone: | (415) 567-9000 |
| Project Address: | 1415 Mission Street | Assessor's Block and Lot: | Block 3510, Lot 001 |
| City and County: | San Francisco | | |

Project Description: The 11,424-square-foot project site is located at 1415 Mission Street (Assessor's Block 3510, Lot 001), on the southwest corner of Mission and Tenth Streets, on the block bounded by Mission and Howard Streets to the north and south and Tenth and Eleventh Streets to the east and west, in the Mid-Market neighborhood. The proposed project includes the demolition of the existing one-story commercial building, currently used as an attended parking lot facility, and construction of a new 16-story, 150-foot-tall, approximately 203,500-gross-square-foot mixed-use building. The proposed building would include approximately 2,200 square feet of ground floor commercial space, 156 residential units (53 studio, 84 one-bedroom, and 19 two-bedroom) and a four-level underground parking garage with 78 independently accessible spaces or up to 136 valet spaces. Access to the residential and commercial parking and one vehicle loading space would be from 10th Street.

The project site is located within a Heavy Commercial (C-M) zoning district and 130-L height and bulk district. The proposed project seeks to rezone the site and would therefore require a Zoning Map and *San Francisco Planning Code* Text Amendments (*Planning Code* Section 302), to establish a new Tenth & Mission Special Use District (SUD), which would (a) rezone the site from C-M to Downtown General Commercial (C-3-G) and change the height and bulk district from 130-L to 150-S; (b) eliminate restrictions on residential density; and (c) eliminate the floor area ratio (FAR) limit for residential uses. The proposed project would require Downtown Permit Review (*Planning Code* Section 309), and exceptions to the usable open space, dwelling unit exposure, rear yard, and off-street parking requirements.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT. AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), 15065 (Mandatory Findings of Significance), and the following reasons, as documented in the Initial Study for the project, which is attached.

Written comments on the scope of the EIR will be accepted until the close of business on **January 31, 2008**. Written comments should be sent to Bill Wycko, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103.

State Agencies. We need to know the views of your agency as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR when considering a permit or other approval for this project. Please include the name of a contact person in your agency. Thank you.

December 29, 2007

Date

Rich Cooper, for

Bill Wycko, Acting Environmental Review Officer

cc: Steven Kay, R & K Investments; Jared Eigerman, Project Attorney; Julian Banales, Neighborhood Planner Southeast Quadrant; Distribution List; Supervisor Chris Daly, District 6; Bulletin Board; Master Decision File.

THIS PAGE INTENTIONALLY LEFT BLANK

INITIAL STUDY

2005.0540E 1415 Mission Street

A. PROJECT DESCRIPTION

Project Location and Site Characteristics

The project site (Assessor's Block 3510, Lot 001) is located at 1415 Mission Street in the South of Market neighborhood, on the southwest corner of Mission and Tenth Streets, on the block bounded by Mission Street to the north, Tenth Street to the east, Howard Street to the south, and Eleventh Street to the west (see Figure 1, page 2). The approximately 11,424-square-foot (0.26 acre) project site is essentially level, at an elevation of approximately 35 feet above Mean Sea Level (MSL) and contains a one-story, 18-foot-tall, approximately 5,000-square-foot (-sq.ft.) commercial building, situated at the southern edge of the lot, and set back from Mission Street by a paved surface parking lot. The site was last occupied by a tire sales and repair business and is currently used as an attended indoor/outdoor parking facility. The former auto service bays of the existing building are currently used for vehicle parking and the office portion of the building is used as the office of the parking facility. The existing building and paved parking area cover the entire site and is devoid of vegetation. The site is surrounded by a chain-link fence, with curb cuts and access gates on both Mission and Tenth Streets. The project site is located within a Heavy Commercial (C-M) zoning district and 130-L height and bulk district.

Project Features

The proposed project would demolish the existing one-story automotive retail and service building and adjoining asphalt parking lot at the site, and construct a 16-story, 150-foot-tall, approximately 203,500-sq.ft. mixed-use building with 156 residential units, about 2,200 square feet (sq.ft.) of ground floor commercial space and a four-level below-grade parking garage for up to 78 independently-accessible, or 136 valet parking spaces. (See Figures 2 to 15: Site Plans and Elevations, pages 3 to 16.)

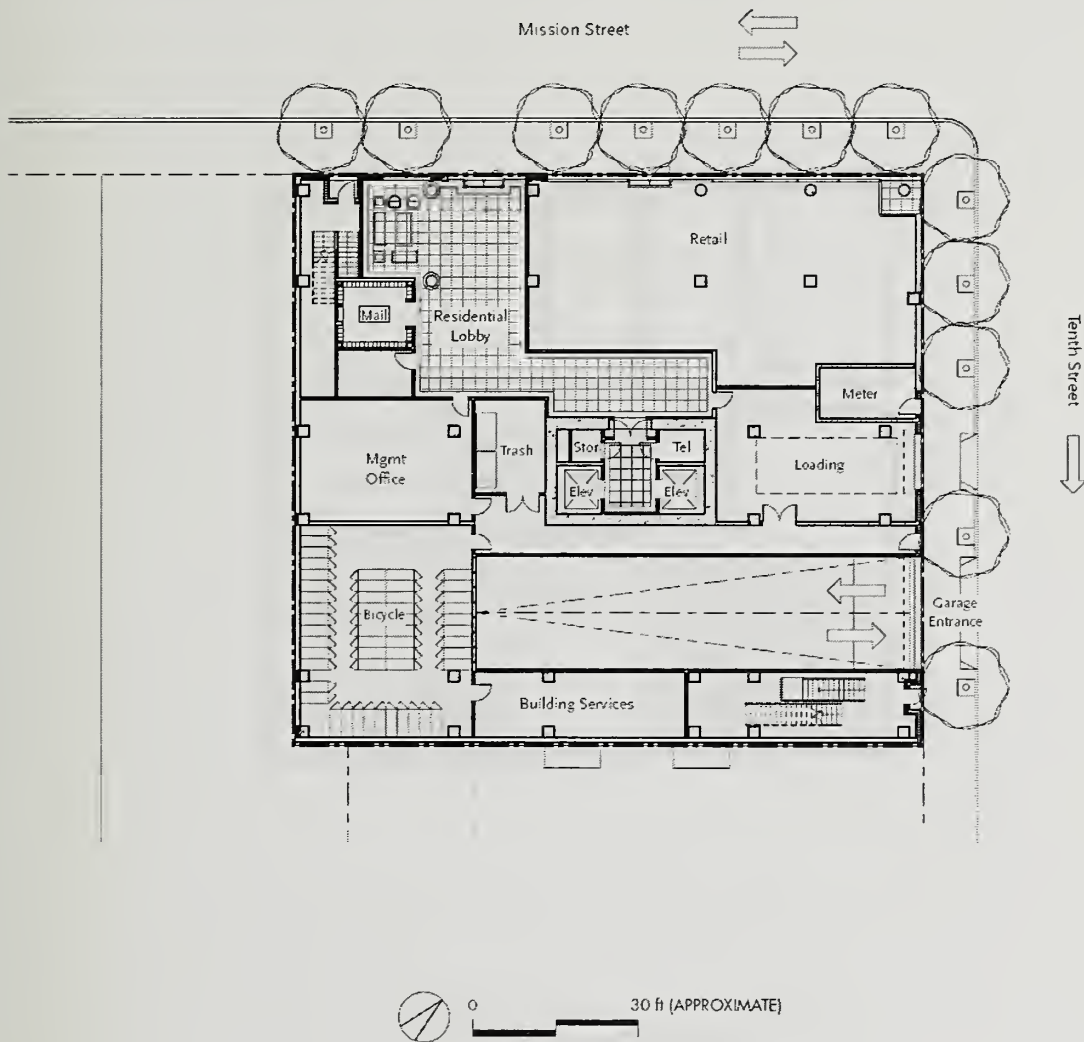
The proposed, approximately 145,000 sq.ft., residential space, located on the second through sixteen floors, would be a mix of 53 studio, 84 one-bedroom, and 19 two-bedroom units, ranging in size from approximately 425 to 1,200 sq.ft. Of the 156 units, 23 units, or approximately 15 percent, would be designated as affordable units, as required under the City's Inclusionary Affordable Housing Program.



Source: During Associates

6-14-07

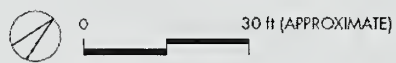
Proposed Project Location Figure 1



Source: Heller Manus

9.7.07

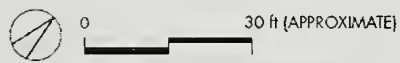
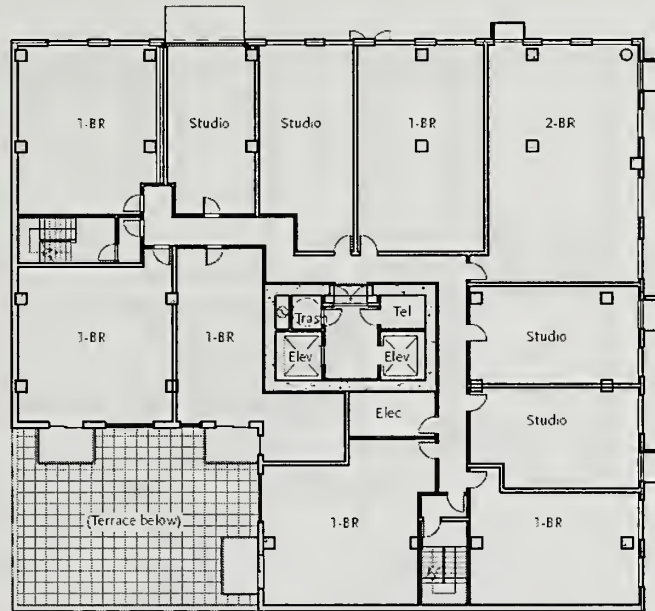
Proposed Ground Floor Plan Figure 2



Source: Heller Manus

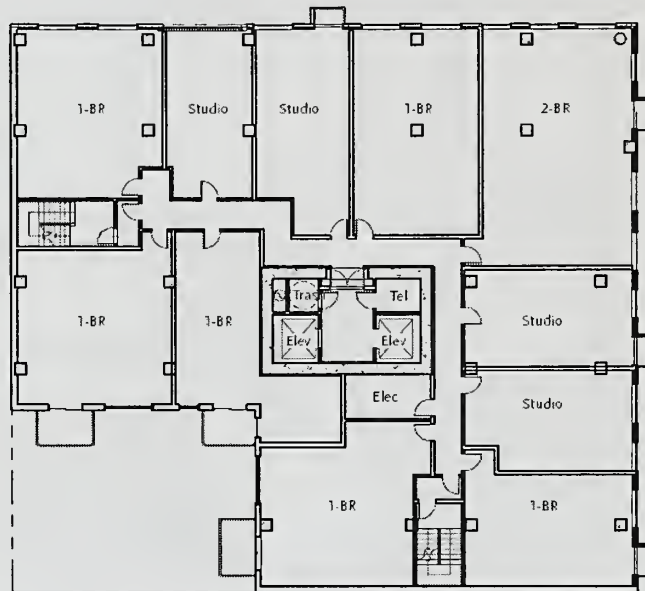
9/14/07

Proposed Second Floor Plan Figure 3



Source: Heller Manus
9-11-07

Proposed Third Floor Plan Figure 4

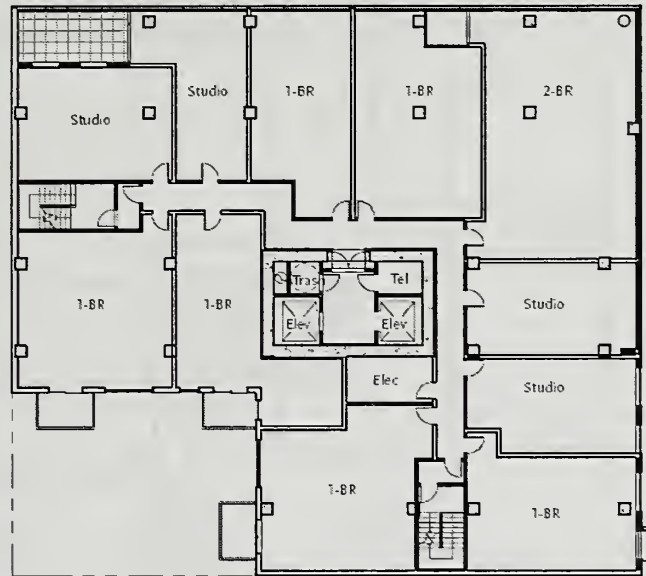


Note: Levels four to seven vary by balcony placement along the north and east sides of the building.



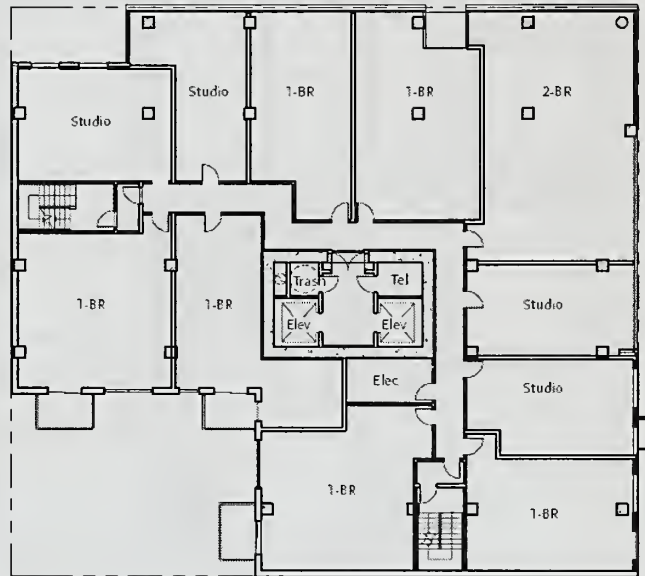
Source: Heller Manus
12/6/07

Proposed Sample Floor Plan—Levels Four to Seven Figure 5



Source: Heller Manus
12.6.07

Proposed Eighth Floor Plan Figure 6



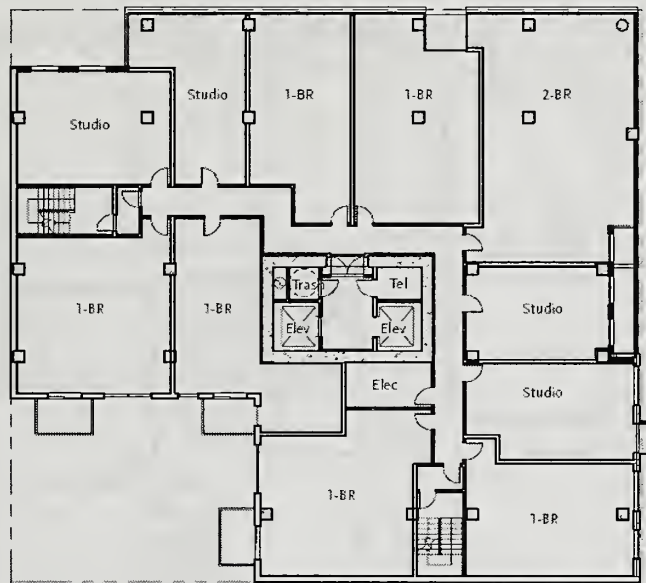
Note: Levels nine and ten vary by balcony placement along the east side of the building.



Source: Heller Manus

12.6.07

Proposed Sample Floor Plan—Levels 9 & 10 Figure 7

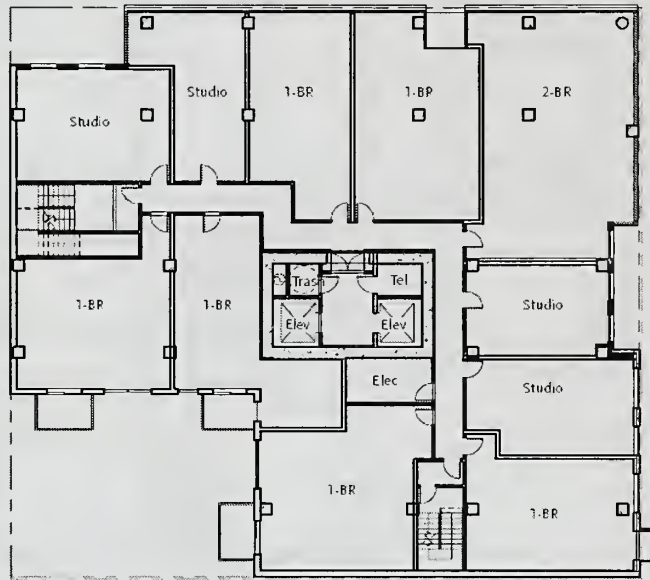


Note: Levels eleven to thirteen vary by balcony placement along the east side of the building.



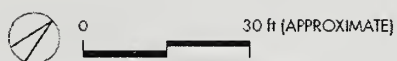
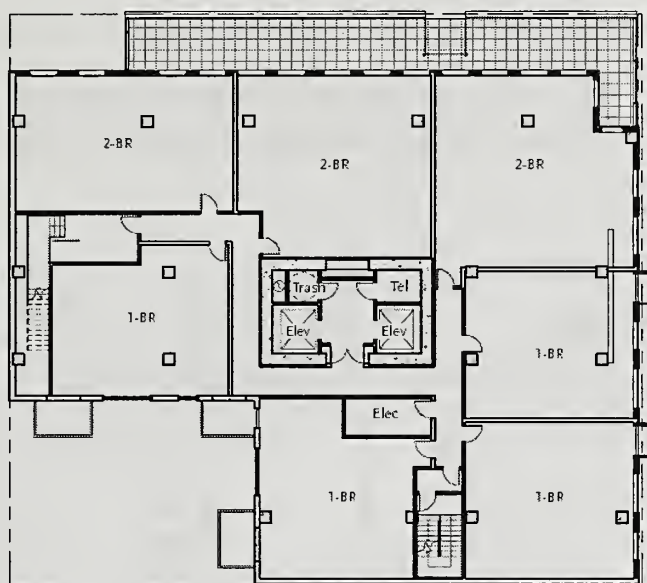
Source: Heller Manus
12-6-07

Proposed Floor Plan—Levels 11 & 13 Figure 8



Source: Heller Manus
12-6-07

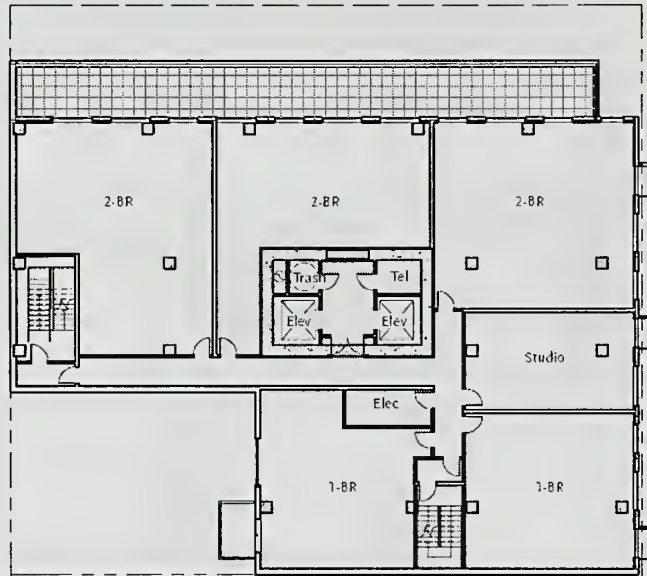
Proposed Fourteenth Floor Plan Figure 9



Source: Heller Manus

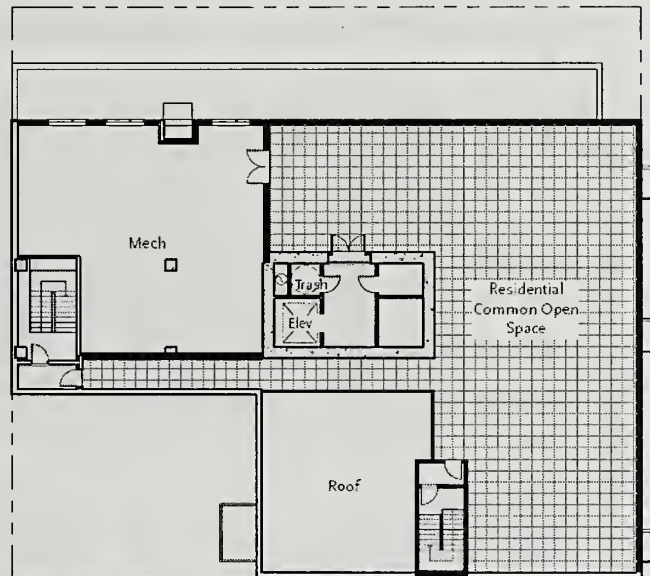
12-6-07

Proposed Fifteenth Floor Plan Figure 10



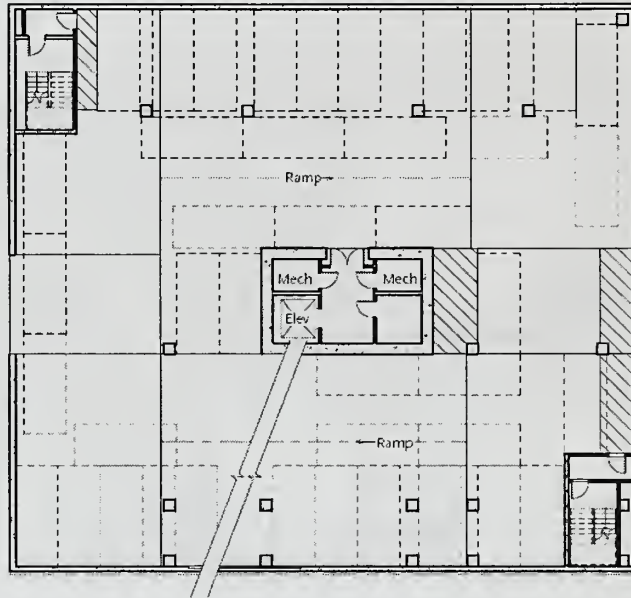
Source: Heller Manus
12-6-07

Proposed Sixteenth Floor Plan Figure 11



Source: Heller Manus
12.6.07

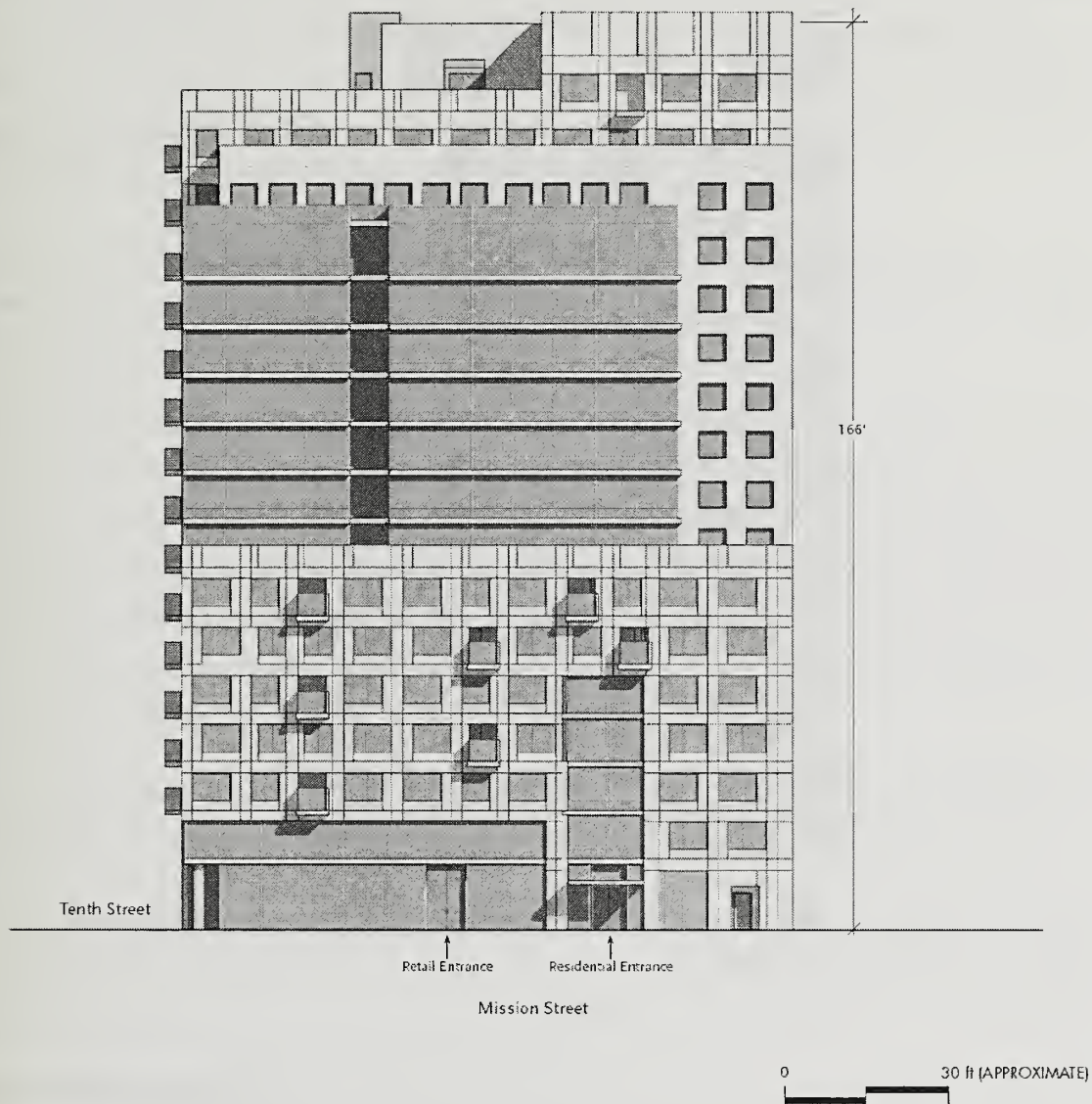
Proposed Roof Floor Plan Figure 12



Source: Heller Manus

12.6.07

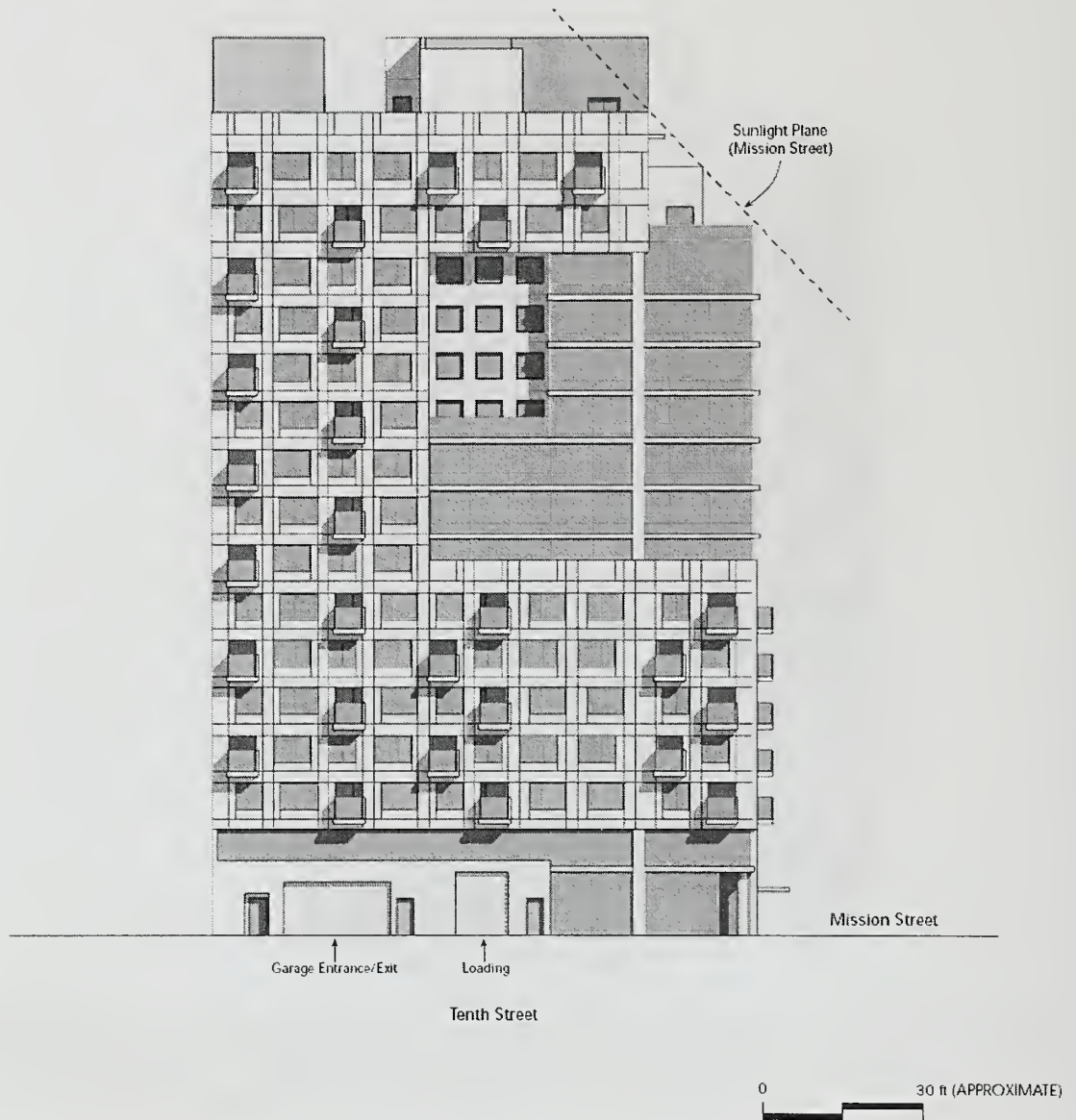
Proposed Basement (Levels B1–B4) Valet-Controlled Parking Plan Figure 13



Source: Heller Manus

12.6.17

Proposed Mission Street Elevation Figure 14



Source: Heller Manus
12-6-67

Proposed Tenth Street Elevation Figure 15

The ground floor of the building would be comprised of a residential lobby facing Mission Street and 2,200 sq.ft. of commercial space at the corner of Mission and Tenth Streets. An approximately 700-sq.ft. building management office and a secure 52-space bicycle storage area would be located in the interior portions of the ground floor. The bicycle storage area would be accessible by a pedestrian entrance on Tenth Street. Screened entrances to a street-level freight and service loading area and an underground parking garage would be located on the building's Tenth Street frontage. The proposed project would include street trees along both the Mission and Tenth Street frontages.

The four-level, 45,615 sq.ft., below-grade parking garage would include up to 78 independently accessible parking spaces, or 136 valet-operated spaces. The parking garage would include five handicapped parking spaces and one additional car share space.

Approximately 3,375 sq.ft. of common usable open space would be provided at the penthouse (roof) level for the private use of residents. Eighty-eight of the 156 dwelling units would have access to private open space in the form of balconies or terraces ranging in size from 36 to 330 sq.ft. and totaling approximately 7,050 sq.ft. In addition to the residential, retail/personal services, parking, and open space described above, there would be about 7,000 square feet of residential common area (including lobby, stairways, bicycle parking, mail room, trash room, management office, building services room, loading stall, and storage space) on the ground floor, and 3,400 square feet of mechanical space.

The proposed project would require excavation to a depth of approximately 45.5 feet for the four-level parking garage and foundation, and removal of approximately 16,000 cubic yards of soil.

Project construction is estimated to take approximately 21 months with a construction cost of approximately \$16.5 million. The project sponsor is R & K Investments and the project architect is Heller Manus Architects.

B. PROJECT SETTING

The project site vicinity (within one to two blocks in this Mid-Market neighborhood) consists of a mix of land uses, including commercial, office, retail, restaurant, public storage, parking lots, and some residential uses. Several of these buildings (located to the south and east of the project) contain residential uses. There are a variety of building types, sizes, and ages on the project block and in the vicinity.

Directly west¹ of the project site is a five-story office building with a surface parking area. Adjacent to the project site, to the south, is a three-story residential hotel building providing social services on the ground floor and residential hotel units above. Tenth Street is located east of the project site, and Mission Street is located north of the project site.

Land uses along the south side of Mission Street on the project block include the five-story office building with surface parking mentioned above and a seven-story light industrial building containing a storage business at the southeast corner of Mission and Eleventh Streets. Land uses on the south side of Mission Street east of Tenth Street consist of one- to three-story office, commercial, industrial, church buildings and associated surface parking with some residential uses.

Land uses along the north side of Mission Street on the project block consist of non-residential uses, including a paved surface parking lot and the existing six-story portion of the mixed use office/restaurant/ wholesale retail/parking building (1455 Market Street) which extends from Mission Street to Market Street along Eleventh Street and has an existing 20-story tower on the Market Street corner. East of the project site, north of Mission Street between Tenth and Ninth Streets, is occupied primarily by non-residential uses, consisting of surface parking areas and one- to four-story buildings occupied by restaurant, commercial, office, light industrial, and residential uses.

South of the project site, and along the west side of Tenth Street between Mission and Howard Streets, uses consist of two- to three-story buildings occupied by commercial, industrial, office, auto service, and residential uses. The east side of Tenth Street, south of the project site, between Mission and Howard Streets, is occupied by a surface parking area and one- to four-story buildings with retail, office, commercial, and light industrial uses.

North of Mission Street, the west side of Tenth Street, between Mission and Market Streets, contains the paved surface parking lot mentioned above, which is the site of an approved Mercy Housing residential building. North of Mission Street, on the east side of Tenth Street between Mission and Market Streets, are the one-story restaurant and parking area mentioned above and an 11-story office building.

¹ It should be noted that in the South of Market area, streets that run in the northwest/southeast direction, such as 10th and 11th Streets are generally considered north-south streets, whereas streets that run in the southwest/northeast direction, such as Mission, Market, and Howard Streets are generally considered east-west streets.

C. COMPATIBILITY WITH ZONING, PLANS, AND POLICIES

| | <i>Applicable</i> | <i>Not Applicable</i> |
|---|-------------------------------------|--------------------------|
| Discuss any variances, special authorizations, or changes proposed to the <i>Planning Code</i> or Zoning Map, if applicable. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Discuss any conflicts with any adopted plans and goals of the City or Region, if applicable. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Discuss any approvals and/or permits from City departments other than the Planning Department or the Department of Building Inspection, or from Regional, State, or Federal Agencies. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

San Francisco Planning Code

The *San Francisco Planning Code (Planning Code)*, which incorporates the City's Zoning Maps, implements the *San Francisco General Plan (General Plan)* and governs permitted uses, densities, and configuration of buildings within the City. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless (1) the proposed project conforms to the *Planning Code*, (2) allowable exceptions are granted pursuant to provisions of the *Planning Code*, or (3) amendments to the *Planning Code* are included as part of the proposed project.

The project is located adjacent to, but not within two active planning areas—the Market-Octavia and Western SoMa planning areas. The Market-Octavia and adjacent areas are undergoing transition. The proposed project and other major developments in the project vicinity are part of a trend toward increased development density, to concentrate activities along established commercial streets such as Market and Mission Streets, and to develop new housing close to established transit lines. The areas adjacent to the project site in the Market-Octavia Plan Area would be within the proposed "Van Ness-Market Downtown Residential Special Use District." The new Market-Octavia zoning would facilitate and encourage new high-density housing by lifting residential density limits, and allowing floor-area ratio bonuses above the existing maximum. The Market-Octavia Plan would generally lower height limits for properties fronting Mission Street east of Van Ness Avenue from 130 feet to 85 feet, extending to the western property line of the subject property, which currently has a height limit of 130 feet, but is not included in the Market & Octavia Plan area. Therefore, the project, as proposed, would be inconsistent with the proposed height rezoning of the adjacent Market-Octavia Plan.

Planning efforts for the Western SoMa are at a preliminary stage, and the provisions of any future plan are uncertain. A Draft Community Plan released "for discussion only" indicates that future zoning for the Tenth Street corridor could continue to allow commercial and industrial uses at lower building levels

with residential uses permitted only at the third floor of buildings or higher. In contrast to the Market-Octavia and Mid-Market areas, the Western SoMa Draft Plan appears to be intended to maintain the prevailing scale of development and preserve arts and light industrial uses. However, increased densities could be permitted in some limited areas, such as a proposed "Downtown Folsom Corridor" between Seventh and Tenth Streets.

The project site is within a Heavy Commercial (C-M) zoning district and a 130-L height and bulk district. A residential use, such as the proposed project, is a conditionally permitted use in a C-M district at a density ratio not exceeding the number of dwelling units permitted in the nearest R district, provided that the maximum density ratio shall in no case be less than that for an RM-4 district. The nearest R district to the project site is Service/Light Industrial/Residential (SLR), located immediately east of the site. Both the SLR and RM-4 districts permit up to one dwelling unit per 200 sq.ft. of lot area. Thus, the permitted residential density at the project site is one unit per 200 sq.ft. of lot area. The basic Floor Area Ratio (FAR) limit in the C-M district is 9.0 to 1 (*Planning Code* Table 124). Because it is a corner lot, the project site is eligible for a 25 percent floor area premium that increases the permitted FAR limit to 11.25 to 1 (*Planning Code* Section 125(a)). In summary, under the existing zoning the building could be a maximum of 130 feet in height, and could contain a maximum of 57 dwelling units and up to 128,520 gross square feet of floor area.

The project site is located within the proposed Mid-Market Redevelopment Project Area which extends generally from Fifth to Tenth Streets along the Market and Mission Street corridors. On October 18, 2005, the San Francisco Redevelopment Agency (SFRA) recommended approval of the Redevelopment Plan for the Mid-Market Redevelopment Project Area. Under a delegation agreement with the SFRA, the Planning Department, in implementing the Plan if it were to be adopted, concurrently proposed to administer land use regulations, specifically proposed zoning changes in the form of a proposed Mid-Market Special Use District (SUD). Under the proposed Mid-Market SUD, the site would potentially change its zoning from C-M to Downtown General Commercial (C-3-G). In 2005, the Planning Commission recommended that the Board of Supervisors adopt both the proposed Mid-Market Redevelopment Plan and the proposed Mid-Market Special Use District, but no approval to date has occurred at the Board level, nor is it foreseeable that the Board would hear or consider approval of the proposed plan. Since the Redevelopment and Planning Commissions forwarded the Mid-Market Redevelopment Plan to the Board, two relevant pieces of legislation were enacted (related to parking in C-3 districts and inclusionary housing requirements citywide) which substantially affect the proposed SUD. The SUD would therefore require substantial reconsideration and re-drafting and would necessitate a fresh round of review and approval at the Planning Commission. This is unlikely and there is no current activity to do so. Therefore

land use restrictions and allowances designed under the proposed Mid-Market SUD are not applicable to review or consideration of the proposed project. Discussion of the Mid-Market SUD is merely intended to provide background into recent past planning efforts undertaken for the project area.

Under current regulations, the project as proposed would require the following zoning changes:

- Planning Code Text Amendment (under *Planning Code* Section 302), to establish a new Tenth & Mission Special Use District (SUD). The Tenth and Mission Streets SUD would (a) eliminate restrictions on residential density; (b) eliminate the FAR limit for residential uses; (c) allow exceptions to the open space requirement under *Planning Code* Section 309; (d) allow exceptions to the dwelling unit exposure requirement under *Planning Code* Section 309.
- Zoning Map Amendment (under *Planning Code* Section 302), to reflect a new Tenth and Mission SUD, to rezone the project site from C-M to C-3-G, and change the height & bulk district from 130-L to 150-S.

Under the proposed C-3-G zoning, residential density up to one dwelling unit per 200 sq.ft. of lot area is a principally permitted use (*Planning Code* Section 215(a)), while greater residential density, as determined by the Planning Commission pursuant to Section 303(c), is a conditionally permitted use (*Planning Code* Section 215(b)). The project would require conditional use approval for residential density in the proposed C-3-G district.

Overall development density in the C-3 Districts is generally regulated by Floor Area Ratio (FAR), and all uses in the C-3 Districts (with very minor exceptions, such as for ground floor retail) are counted toward this total. Parcels in each C-3 district are permitted to build up to a base FAR amount (6.0:1 in the C-3-G) and then must acquire Transferable Development Rights (TDR) in order to exceed this limit up to a maximum cap. The Transferable Development Rights program (Section 128), is intended to preserve historic buildings throughout the downtown by requiring the purchase of unused development credits from eligible historic buildings. The proposed Tenth and Mission SUD would exempt residential uses from Floor Area Ratio calculations, reducing the demand for TDR credits and therefore contributing to the undermining of this program for historic preservation and surpassing the intended overall average density of the area. Significant exemptions from FAR for major classes of uses (e.g. housing) or entire buildings in the C-3 and elimination of the TDR program is not currently proposed or considered in any planning effort or policy document.

Because the proposed project (if rezoned) would include construction in a C-3 district, it would require Downtown Permit Review (Section 309 of the *Planning Code*). Pursuant to Section 309 and the proposed Tenth and Mission Special Use District, the project would require exceptions to the following requirements:

- Dwelling Unit Exposure. *Planning Code* Section 140 requires at least one room within a dwelling unit to face directly on an open area that is either (i) a public street or alley that is at least 25 feet in width, (ii) a side yard or rear yard that meets the requirements of the *Planning Code*, (iii) an open area that is unobstructed and is no less than 25 feet in every horizontal dimension for the floor at which the dwelling unit in question is located and the floor immediately above it, with an increase of five feet in every horizontal dimension at each subsequent floor. Pursuant to the provisions of the proposed 10th and Mission SUD, an exception is required for the exposure of several of the units overlooking the open area at the southeastern corner of the site. The open area measures 37 feet by 32 feet, i.e., it is at least 25 feet in every dimension. However, the open area does not increase by five feet at each succeeding level, and an exception is therefore required.
- Rear Yard. *Planning Code* Section 134 allows the Planning Commission to reduce the 25 percent residential rear yard requirement provided the building location and configuration provide adequate light and air to residential units and open space. The proposed project would require an exception, because the open area would be located in a 42-foot by 32-foot courtyard at the southwestern corner of the property.
- Off-Street Parking. Under *Planning Code* Sections 151.1 and 204.5, the proposed project is permitted by right to provide up to one off-street, accessory parking space for every four dwelling units proposed, or 39 spaces, and an additional 15 spaces for the ground-floor retail/personal service use. Pursuant to the procedures in *Planning Code* Section 309 and 151.1(e), the Planning Commission may authorize additional parking spaces up to the following amounts: up to 0.5 independently accessible spaces per unit; up to 0.75 spaces per unit for any residential unit; and up to one space for two-bedroom units with more than 1,000 sq.ft. of occupied floor area. The project includes a four-level garage that would accommodate up to 78 self-park or 136 valet spaces and therefore requires an exception to authorize parking above the principally permitted amount.

It should be noted that a conditional use application for dwelling unit density in excess of one unit per 125 square feet of lot area was submitted and later withdrawn.² Conditional use authorization for dwelling-unit density (under *Planning Code* Section 215(b)) would not be necessary given the amendments to the *Planning Code* proposed above.

The proposed project would also require approval by the Department of Building Inspection (DBI) for demolition and site permits and temporary construction easements from the Department of Public Works for construction along the street and sidewalk. Any curb or road modifications would require approval by the Department of Parking and Traffic.

² This information is on file and available for public review by appointment at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, as part of the project file 2005.0540C.

Plans and Policies

San Francisco Plans and Policies

In addition to the *San Francisco Planning Code* and zoning policies, development in the City is subject to the *San Francisco General Plan*. The *San Francisco General Plan* provides general policies and objectives to guide land use decisions. Any conflict between the proposed project and policies that relate to physical environmental issues are discussed in Section E, Evaluation of Environmental Effects. The compatibility of the proposed project with *General Plan* policies that do not relate to physical environmental issues will be considered by decision-makers as part of their decision whether to approve or disapprove the proposed project. Any potential conflicts identified as part of the process would not alter the physical environmental effects of the proposed project.

The San Francisco Planning Commission adopted an updated Housing Element of the *General Plan* in May 2004. The San Francisco Board of Supervisors approved the Housing Element in September 2004, and the State Department of Housing and Community Development certified the Element in October 2004. In June 2007, however, the First District Court of Appeals ruled that the updated Housing Element should have been addressed in an EIR. Therefore, this Initial Study refers to relevant policies of both the 2004 Housing Element and the 1990 Residence Element (the previous version).

The 2004 Housing Element of the General Plan "sets forth objectives, policies, and implementing programs to address the critical housing needs" of the City. The 2004 Element addresses the City's goals "of achieving decent, suitable, and affordable housing for current and future San Franciscans." The City intends to address the issues of housing production and affordability in part through a Citywide Action Plan (CAP), which "explores comprehensively the issue of how to meet the need for housing and jobs in ways that capitalize upon and enhance the best qualities of San Francisco as a place."

The objectives of the 2004 Housing Element address new housing supply, housing retention, housing condition, affordability, housing choice, homelessness, density/design/quality of life, and State and regional needs. With regard to housing production, Policy 1.1 of the 2004 Housing Element encourages higher residential density in areas adjacent to downtown and locating housing in areas well served by transit. This policy is similar to Policy 1.1 in the 1990 Residence Element; the 2004 Housing Element also calls for allowable densities in established residential areas to be set at levels which will promote compatibility with prevailing neighborhood scale and character.

Policy 1.5 of the 2004 Housing Element supports the development of affordable housing on surplus public lands. This policy is a modified version of the 1990 Residence Element policy, which calls for

promoting the development of permanently affordable housing on surplus, underused, and vacant public lands.

Relevant housing affordability policies in the 2004 Housing Element include Policy 4.2, which calls for affordable units in larger housing projects. This policy is the same as Policy 7.2 in the 1990 Residence Element. Density/design/quality of life policies in the 2004 Housing Element include Policy 11.1, a new policy which calls for using new housing as a means to enhance neighborhood vitality and diversity, and Policy 11.5, which promotes well-designed housing that enhances existing neighborhood character. The corresponding policy in the 1990 Residence Element calls for housing that conserves existing neighborhood character.

The proposed project would contribute about 156 units to the City's housing supply, thereby helping to meet the City and regional needs for housing. In addition, the sponsor would designate 23 of these units as affordable housing on site, in compliance with the City's Residential Inclusionary Affordable Housing Program. The project would be served by several MUNI lines and would be near the Van Ness MUNI Station. The project would include retail/commercial uses that could enhance the streetscape along Mission and Tenth Streets. The project would increase the density of the project site and vicinity, and the proposed buildings would be taller than the existing uses on the project site. The potential impacts of the project on visual quality and neighborhood character are discussed in Sections E.1 (Land Use and Land Use Planning) and E.2 (Aesthetics) of this Initial Study.

Other elements in the *General Plan* that are relevant to the proposed project include the Community Safety Element, the Recreation and Open Space Element, the Transportation Element, and the Urban Design Element.

Policy 2.1 of the Community Safety Element advocates that new construction meet current structural and life safety standards. Through its permit review process, DBI would ensure that the proposed project would meet these current standards.

Recreation and Open Space Element Policy 2.3 preserves sunlight in public open spaces; the proposed project would not conflict with this policy as it does not have the potential to shade any public open space.

Transportation Element Policy 11.3 encourages development that efficiently coordinates land use with transit service; as noted above the project site is in an area well served by transit. Policy 24.2 supports maintaining and expanding the planting of street trees; the project would plant street trees where currently there are none. Policy 30.5 supports allocating a portion of the provided off-street parking

spaces for compact automobiles, bicycles and motorcycles. The project would include a 52-space bicycle storage area.

Policy 1.1 of the Urban Design Element promotes recognizing and protecting major views in the city. Policy 1.3 recognizes that buildings, when seen together, produce a total effect that characterizes the city and its districts. Policy 3.1 promotes harmony in the visual relationships and transitions between new and older buildings. Policy 3.2 supports avoiding extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance. Policy 3.3 promotes efforts to achieve a high quality design for buildings to be constructed at prominent locations. Policy 3.5 promotes relating the height of buildings to important attributes of the city pattern and to the height and character of existing development. Policy 3.6 promotes relating the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction. As noted above, the potential impacts of the project on visual quality are discussed in Section E.2 (Aesthetics) of this Initial Study, and will be weighed by decision-makers in their decision to approve or deny the proposed project. Policy 4.10 encourages the provision of recreation space in private development. Policy 4.12 promotes installing, promoting and maintaining landscaping in public and private areas. The proposed project would include an open space component, and would include some landscaping in the form of street trees.

The proposed project is in the part of San Francisco covered by the *Downtown Area Plan*, an Area Plan of the *General Plan*. Objectives and policies in the various elements of the General Plan are typically duplicated in area plans, and the objectives and policies in an area plan are generally more detailed and focused. The *Downtown Area Plan* is the policy document that guides growth and development of the mixed-use neighborhood in the Downtown Area, which extends from The Embarcadero to past Van Ness Avenue, north of Market Street and south to Folsom Street, and includes most of the Financial District.

The *Downtown Area Plan* contains a number of policies that address urban design. Policy 13.1 advocates relating the height of buildings to important attributes of the city pattern and to the height and character of existing and proposed development. Policy 15.1 supports ensuring that new facades relate harmoniously with nearby facade patterns. Policy 15.2 supports assuring that new buildings contribute to the visual unity of the city. Policy 16.1 supports conserving the traditional street to building relationship that characterizes downtown San Francisco. Policy 16.4 promotes using designs and materials and including activities at the ground floor to create pedestrian interest. As noted above, the potential impacts of the project on visual quality are discussed in Section E.2 (Aesthetics) of this Initial Study, and will be weighed by decision-makers in their decision to approve or deny the proposed project.

The *Downtown Area Plan* also includes policies relating to loading configuration. Policy 21.1 supports providing off-street facilities for freight loading and service vehicles on the site of new buildings sufficient to meet the demands generated by the intended uses, and seeking opportunities to create new existing buildings. Policy 21.2 discourages access to off-street freight loading and service vehicle facilities from transit preferential streets, or pedestrian-oriented streets and alleys. Mission Street is a transit preferential street; however loading access for the proposed project would be from 10th Street (see Figure 2, page 3). The proposed project's impacts related to transportation, including its loading demand, will be analyzed in the Draft EIR.

The project site lies immediately outside the southeastern edge of the Market & Octavia proposed Van Ness/Market Downtown Transit Residential Special Use District ("Downtown Residential SUD"). The proposed Downtown Residential SUD—adjacent to the project site—would use an underlying C-3-G zoning district, and encourage the development of high-density, mixed-use buildings close to transit services on Market Street and Van Ness Avenue. The Market and Octavia Neighborhood Plan identifies the area as appropriate for residential development and envisions its eventual transformation into a dense, full-service neighborhood.

The project site is located to the north of the Western SoMa planning area, which terminates at Minna Street. A community planning process for the Western SoMa is being conducted by the Western SoMa Citizens Planning Task Force ("Task Force"), which was established by Board of Supervisors Resolution No. 731-04 in November of 2004. According to that resolution, the Task Force is charged with recommending policies to preserve residential enclaves, service and light industrial jobs, and arts and entertainment opportunities. The Task Force is also to consider policies to promote neighborhood-serving retail and guide increased heights and density in appropriate locations on arterial streets.

Currently permitted heights in the vicinity range from a high of 320 feet, on the block to the north of the project site, to a low of 50 feet, on the block to the south of the project site. The other corner lots at the intersection of Tenth and Mission Streets are in 150-S or 160-M height and bulk districts, and a 150-foot tall building was recently approved at the northwest corner. Permitted heights on individual blocks vary widely: on the block to the north, permitted heights range from 150 to 320 feet; on the block to the east, permitted heights range from 50 to 160 feet. Under the Market-Octavia Plan, heights of up to 400 feet would be allowed at the intersection of Market and Van Ness. However, permitted building heights along Mission Street adjacent to and west of the project site would be reduced to 85 feet from the currently permitted 130 feet. The variation in height between the proposed project and the adjacent sites within the Market-Octavia Plan is similar to that envisioned on adjacent blocks to the north and east.

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the City *Planning Code* to establish eight Priority Policies. These policies, and the sections of this Environmental Evaluation addressing the environmental issues associated with the policies, are: (1) preservation and enhancement of neighborhood-serving retail uses; (2) protection of neighborhood character (Question 1c, Land Use); (3) preservation and enhancement of affordable housing (Question 3b, Population and Housing, with regard to housing supply and displacement issues); (4) discouragement of commuter automobiles (Questions 5a, b, f, and g, Transportation and Circulation); (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership (Question 1c, Land Use); (6) maximization of earthquake preparedness (Questions 13 a-d, Geology, Soils, and Seismicity); (7) landmark and historic building preservation (Question 4a, Cultural and Paleontological Resources); and (8) protection of open space (Questions 8 a and b, Wind and Shadow, and Questions 9a and c, Recreation).

Prior to issuing a permit for any project that requires an Initial Study under the California Environmental Quality Act (CEQA), and prior to issuing a permit for any demolition, conversion, or change of use, and prior to taking any action that requires a finding of consistency with the *General Plan*, the City is required to find that the proposed project or legislation would be consistent with the Priority Policies. As noted above, the consistency of the proposed project with the environmental topics associated with the Priority Policies is discussed in the Evaluation of Environmental Effects, providing information for use in the case report for the proposed project. The case report and approval motions for the proposed project will contain the Department's comprehensive project analysis and findings regarding consistency of the proposed project with the Priority Policies.

Environmental plans and policies are those, like the *Bay Area Air Quality Plan* and the *Bay Area 2005 Ozone Strategy*, which directly address physical environmental issues and/or contain targets or standards that must be met in order to preserve or improve characteristics of the City's physical environment. The proposed project would not obviously or substantially conflict with any such adopted environmental plan or policy.

Regional Plans and Policies

The five principal regional planning agencies and their over-arching policy plans to guide planning in the nine-county bay area include the Association for Bay Area Governments' (ABAG) "*A Land Use Policy Framework*" and *Projections 2005*, the Bay Area Air Quality Management District's (BAAQMD's) *Clean Air Plan* and *Bay Area 2005 Ozone Strategy*, the Metropolitan Transportation Commission's *Regional*

Transportation Plan – Transportation 2030, the San Francisco Regional Water Quality Control Board's *San Francisco Basin Plan*, and the San Francisco Bay Conservation and Development Commission's *San Francisco Bay Plan*. Due to the size of the proposed project, there would be no anticipated conflicts with regional plans.

D. SUMMARY OF ENVIRONMENTAL EFFECTS

The proposed project could potentially affect ("Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated") the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental topic.

- | | | |
|--|--|---|
| <input checked="" type="checkbox"/> Land Use | <input checked="" type="checkbox"/> Air Quality | <input type="checkbox"/> Geology and Soils |
| <input checked="" type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Wind and Shadow | <input type="checkbox"/> Hydrology and Water Quality |
| <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Hazards/Hazardous Materials |
| <input checked="" type="checkbox"/> Cultural & Paleontological Resources | <input type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Mineral/Energy Resources |
| <input checked="" type="checkbox"/> Transportation and Circulation | <input type="checkbox"/> Public Services | <input type="checkbox"/> Agricultural Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Mandatory Findings of Signif. |

1. Effects Found to be Potentially Significant

This Initial Study evaluates the proposed 1415 Mission Street residential and retail project to determine whether it would result in significant environmental impacts. Topics noted as "Potentially Significant Impact" will be further evaluated in the EIR assessment to determine whether a significant impact would occur. The proposed project, when combined with other projects in the area that are under construction, approved, or under review could have a significant cumulative land use impact, as well as a significant cumulative aesthetic impact. The proposed project would increase traffic, transit and parking demand in the area, and because traffic is a primary source of noise pollution, the cumulative traffic noise impact of the proposed project is not known and is potentially significant. The proposed project could also have a significant effect on wind and shadow due to its height and configuration. The potential cumulative land use, cumulative aesthetics, transportation and traffic, cumulative traffic noise, and wind impacts will be analyzed in the EIR. The EIR may provide a discussion of other topics such as project-specific aesthetics and land use and population, which are determined in this Initial Study not to be significant, but would be included in the EIR for informational purposes.

2. Effects Found Not to be Significant

The following potential individual and cumulative environmental effects of the proposed project have been determined either to be less than significant or to be reduced to a less-than-significant level through mitigation measures included in this Initial Study: project-specific land use and aesthetics, population and housing, cultural and paleontological resources, air quality, recreation, utilities and service systems, public services, biological resources, geology and soils, hydrology and water quality, hazards and hazardous materials, mineral and energy resources, and agricultural resources. These items are discussed with recommended mitigation measures, where appropriate, in Section E, and require no further environmental analysis in the EIR. All mitigation measures identified, including measures for archeological resources (**Mitigation Measure 1, page 87**), construction air quality impacts (**Mitigation Measure 2, page 91**) and hazardous materials (**Mitigation Measure 3, page 92, Mitigation Measure 4, page 92, and Mitigation Measure 5, page 94**) have been agreed to by the project sponsor and will be incorporated into the proposed project. As indicated above, the EIR will discuss project-specific aesthetics and land use, population, and air quality impacts for informational purposes although this Initial Study determined effects resulting from the proposed project would not be significant.

E. EVALUATION OF ENVIRONMENTAL EFFECTS

Except for the categories of cumulative land use and aesthetics, transportation, cumulative noise, and wind and shadow, the items on the Initial Study Environmental Evaluation Checklist have been checked either "Not Applicable," "No Impact," "Less Than Significant," or "Less Than Significant with Mitigation Incorporated." These categories indicate that, upon evaluation, staff has determined that the proposed project could not have a significant adverse environmental effect in relation to these items. For items where the conclusion is "Potentially Significant Impact," the analysis will be included in the EIR. For Checklist items checked other than "Not Applicable," the Initial Study discusses that particular issue. For all of the items checked "Not Applicable," the conclusions regarding potential significant adverse environmental effects are based on field observation, staff and consultant experience and expertise on similar projects, and/or standard reference material available within the Planning Department, such as the Department's *Transportation Guidelines for Environmental Review*, or the California Natural Diversity Data Base and maps, published by the California Department of Fish and Game. For each Checklist item, the evaluation has considered both the individual and cumulative impacts of the proposed project.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|---|---|---|---|-------------------------------------|---------------------------|
| 1. LAND USE AND LAND USE PLANNING – Would the project: | | | | | |
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Have a substantial impact upon the existing character of the vicinity? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

The project site is located in the northeast portion of San Francisco within the Mid-Market neighborhood, in a relatively level grade. The proposed project is one block south of Market Street, approximately two blocks south of the Civic Center area, and approximately one and one-half blocks east of Van Ness Avenue. The zoning district of the project site is Heavy Commercial (C-M) and the surrounding area is a mixture of zoning districts, including Downtown General Commercial (C-3-G) to the north, C-M and Downtown Support (C-3-S) to the east, Service/Light Industrial/Residential (SLR) to the south, C-M, Residential House, Three-Family (RH-3) and Residential Enclave District (RED) to the west.

The project site is within a 130-L height and bulk district that stretches from Tenth Street to Twelfth Street three blocks to the west, is bounded by Mission Street to the north and Minna Street to the south, and extends south to Howard Street west of Lafayette Street. There is a variety of height and bulk districts nearby, ranging in allowable height from 50 feet (south of the project site) to 320 feet (approximately one-half block north of the site).

Land uses in the vicinity of the project site are mixed and include commercial, office, retail (including apparel and custom T-shirts), restaurant, public storage, parking lots, and residential uses. There are many buildings of different type, size, and age. On the project block, heights vary from one to seven stories, and up to 30 stories in the project vicinity (approximately two blocks from the project site). Most buildings in the project vicinity are in the range of one to five stories. A number of projects with more intense land uses are under construction, approved, or under review in the area (please refer to Land Use Character, page 33, for discussion).

The project site is currently developed with an existing one-story commercial building and paved parking area. Adjacent to the project site, to the west, is 1449-1453 Mission Street, of which the western portion is occupied by a five-story office building and the eastern portion (adjacent to the project site) is occupied by a fenced, paved surface parking area. Adjacent to the project site, to the south, is a three-story residential hotel building with a social service use on the ground floor and residential uses above (122 Tenth Street). Tenth Street is located east of the project site, and Mission Street is located north of the project site.

Land uses along the south side of Mission Street on the project block consist of non-residential uses. Further west of the 1449-1453 Mission Street building is a paved surface parking area, and a seven-story light industrial building containing a storage business (1475 Mission Street) at the southeast corner of Mission and Eleventh Streets. Land uses on the south side of Mission Street east of Tenth Street are also non-residential. Between Tenth and Grace Streets is a three-story industrial building (1375-1385 Mission Street) and a paved surface parking area. Between Grace Street and Washburn Street, from west to east, are a vacant one-story church building (1349 Mission Street), a one-story office building (1345 Mission Street), a two-story office building (1339 Mission Street), and a three-story industrial building (1337 Mission Street). Between Washburn and Ninth Streets is a one-story commercial building (1321 Mission Street/104 Ninth Street).

Land uses along the north side of Mission Street on the project block also consist of non-residential uses. Opposite the project site on the north side of Mission Street is a paved surface parking lot mentioned above. Between the parking lot and Eleventh Street, occupying the remainder of the block to the west, is the existing six-story portion of the mixed use (office, commercial, and parking) 1455 Market Street building, which extends from Mission Street to Market Street along Eleventh Street and has an existing 20-story tower on the Market Street corner. East of the project site, the north side of Mission Street between Tenth and Ninth Streets is occupied primarily by non-residential uses. The northeast corner of Mission and Tenth Streets contains a one-story restaurant (1390 Mission Street) surrounded by a paved parking area. Farther east are a four-story commercial/office building (1370-1372 Mission Street), a four-story light industrial building (1360 Mission Street), a vacant two-story commercial building (1340 Mission Street), a four-story commercial building (1338 Mission Street), a three-story loft-style residential building (1328 Mission Street), a two-story commercial building (1310 Mission Street), and, at the northwest corner of Mission and Ninth Streets, a three-story building with a ground-floor restaurant and residential above (98 Ninth Street).

South of the project site is the three-story residential hotel building mentioned above. Farther south, at the northwest corner of Tenth and Minna Streets, is a three-story industrial building (128-130 Tenth Street). On the west side of Tenth Street between Minna and Natoma Streets from north to south are a two-story commercial/office building (138-142 Tenth Street), a three-story residential building (154 Tenth Street), and a two-story building with ground-floor auto service and office above (160 Tenth Street). On the west side of Tenth Street between Natoma and Howard Streets is a two-story light industrial (public storage) building (190 Tenth Street/1436 Howard Street). The east side of Tenth Street, south of the project site, is occupied by non-residential uses. At the southeast corner of Mission and Tenth Streets is the paved parking lot for the adjacent business mentioned above. Farther south, on the east side of Tenth Street, are a three-story commercial building (113 Tenth Street), a vacant three-story retail/office building (115 Tenth Street), a three-story commercial/office building (123-127-131 Tenth Street), a vacant three-story commercial/office building (141 Tenth Street), a vacant two-story commercial building (147-149 Tenth Street), a two-story light industrial building (151 Tenth Street), a one-story commercial building (165 Tenth Street), and, at the northeast corner of Tenth and Howard Streets, a four-story office building.

North of Mission Street, the west side of Tenth Street between Mission and Jessie Streets contains the paved surface parking lot mentioned above, site of an approved 136-unit affordable housing project by Mercy Housing. Farther north, between Jessie and Market Streets, a 35-story, 720-unit residential building (1401 Market Street) is under construction. North of Mission Street, on the east side of Tenth Street between Mission and Jessie Streets, are the one-story restaurant and parking area mentioned above. On the east side of Tenth Street between Jessie and Stevenson Streets is an 11-story office building (875 Stevenson Street).

Based on the discussion above, it is evident that the project site lies within a mixed use neighborhood with a variety of building sizes, ages and shapes. The EIR will include photosimulations of what the area is likely to look like with the proposed project and other construction in the area.

Land use impacts are considered to be significant if the proposed project would divide an established community, conflict with any applicable land use plan, policy, or regulation, or if there would be a substantial impact upon the existing character of land uses in the vicinity.

Community Division

The proposed project would replace an existing one-story building on the corner of 10th and Mission Streets with a 16-story building, but would not disrupt or divide the physical arrangement of surrounding uses and activities. The proposed project would be constructed within the existing lot

boundaries, would not interfere with or change the existing street pattern, or impede the passage of persons or vehicles. The surrounding uses and activities would remain and continue to interrelate with each other as they do at present.

Conflict with Adopted Plans and Regulations

As described above in Section C, Compatibility with Zoning, Plans, and Policies, the proposed project would not obviously or substantially conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the proposed project adopted for the purpose of avoiding or mitigating an environmental effect.

Land Use Character

Significance criterion 1(c) was enacted as a Priority Policy by the voters of San Francisco in 1986 as reflected in Priority Policies 1 and 2 (see discussion on page 27). As discussed above, the proposed residential and retail building would not introduce new or incompatible land uses to the area. Although uses in the immediate project vicinity are primarily non-residential, small-scale residential land uses do exist and several large-scale residential projects are approved or under construction. Although the proposed project would be taller and a more intense land use than the immediately adjacent land uses, particularly residential developments, the proposed project would be consistent with the varied size, structures and mixed land use character of the area.

Existing residential buildings in the project vicinity include:

- the three-story building immediately south of the project site (122 Tenth Street),
- the three-story 154 Tenth Street building (approximately one-half block from the project site),
- three-story 1328 Mission Street building (approximately one-half block from the project site), and
- the three-story 98 Ninth Street building approximately one block east of the project site.

The following project in the project vicinity is under construction:

- the 179-unit Argenta project is under construction at One Polk Street.

The following projects in the project vicinity have been approved:

- the 720-unit 1401 Market Street project at the southwest corner of Market and Tenth Streets,
- the Mercy Housing project at 9th and 10th Streets between Mission and Jessie Streets, which includes two affordable housing developments:
 - (1) a 123-foot-tall, 136-unit affordable family housing project at the northwest corner of Tenth and Mission Streets, and
 - (2) a 107-unit affordable senior housing project at Ninth and Jessie Streets,

- the 56-unit mixed use residential/office/retail project at 77 Van Ness located on the southwest corner of Van Ness Avenue and Fell Street, and
- the 1,900 unit mixed use residential/retail Trinity Project at 1177 Market Street located on the southeast corner of Market and Eighth Streets.

Three projects in the vicinity are under review:

- Fox Plaza at Market and Hayes Streets, which would provide 250 dwelling units;
- 137 affordable rental units at 1400 Mission Street, proposed by the Tenderloin Neighborhood Development Corporation (TNDC) and Citizen's Housing; and
- 260 dwelling units at 55 Ninth Street, proposed by Argenta.

The intensity of the proposed project would be greater than the low-rise buildings in the project vicinity, but consistent with the existing taller and more intense uses in the project vicinity, as well as those that are proposed. The change to the land use character that would be effected by the proposed project would not rise to a level of potential significance.

Currently, permitted heights in the vicinity range from a high of 320 feet on the block to the north of the project site to a low of 50 feet on the block to the south of the project site. The scale and massing of the proposed building would be greater than the adjacent buildings to the south, and low-rise buildings on the opposite sides of Mission and Tenth Streets from the proposed project. The proposed 150-foot-tall building would not be consistent with the existing 130-L height and bulk district. However, the scale and massing of the proposed building would be consistent with other large buildings in the project vicinity, including the 20-story 1455 Market Street tower with six-story podium one-half block west of the site, the 11-story office building at 875 Stevenson Street one-half block north of the site, and the 30-story residential/ commercial/office Fox Plaza tower one block north of the site. The proposed project would also be relatively consistent with the scale and massing of the approved 123-foot-tall, 136-unit affordable Mercy Housing project at the northwest corner of Tenth and Mission Streets, the approved 35-story 1401 Market Street residential building at the southwest corner of Market and Tenth Streets, one block north of the project site, and the under-construction 17-story Argenta residential project at One Polk Street, one and one-half blocks north of the site. These buildings contain a mixture of residential and non-residential development characteristic of the Mid- Market area. The proposed uses would expand the residential and retail uses in the vicinity, would not conflict with surrounding uses in the area, as residential uses are a current use in the vicinity, and would not substantially or adversely change the character of surrounding land uses.

In summary, the proposed project would intensify existing land uses on the project site, but would not substantially or adversely alter the character of the neighborhood either by itself or in conjunction with other development in the area. These changes would not be considered a significant impact because the project would be consistent with the mixed-use character of the area and consistent with the changes affected by the transitioning nature of the project area.

Conclusion

The proposed project would add residential and retail uses, and intensify existing land uses on the project site, but would not physically divide an established community, conflict with adopted land use plans, or substantially and adversely alter the land use character of the vicinity. The proposed project's land use impacts would therefore be less than significant under CEQA. For informational purposes, project-specific land use issues will be discussed in the EIR.

Cumulative Effects

The project site is in a developed urban area in transition. The Land Use Character section, page 33, lists developments that are under construction, have been approved, or are being reviewed within a two-block radius to the north and west along Market and Mission Streets. Considering development under construction and development in the reasonably foreseeable future, development of the project site could result in cumulative land use impacts. The potential for cumulative land use impacts will be evaluated in the EIR.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|---|---|-------------------------------------|---------------------------|
| 2. AESTHETICS—Would the project: | | | | | |
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment which contribute to a scenic public setting? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or which would substantially impact other people or properties? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Scenic Vistas

The topography of the project area is essentially level, with surrounding urban development, which together limit views of other parts of the city, to narrow segments of the skyline visible along the corridors of Mission and Tenth Streets.

The nearest public open spaces in the project vicinity include: the Joseph L. Alioto Performing Arts Piazza (Civic Center Plaza), located three blocks to the north; Howard and Langton Mini-Park, located approximately four blocks east; Victoria Manalo Draves Park, located approximately five blocks east of the project site; and Hayes Green (also known as Patricia's Garden), located approximately five blocks west. None of these open spaces are visible from street-level vantage points at the project site.

The Joseph L. Alioto Performing Arts Piazza is a one-square-block park in the block bounded by Polk, McAllister, Larkin, and Grove Streets. The southern portion of the Piazza faces the project site; however, intervening buildings, including the 30-story Fox Plaza tower, the 20-story 1455 Market Street building, the 35-story 1401 Market Street building currently under construction, and the approved 123-foot-tall residential building at the northwest corner of Tenth and Mission Streets, will screen views of most, if not all, of the proposed project. Portions of the upper floors of the proposed project may be visible from the Piazza; however, due to the presence of intervening buildings, the project would not be visually prominent or differ substantially in character from the existing skyline. The upper portion of the proposed project may be visible from some north-facing locations in the upper levels of St. Joseph's Church, but, as with views from the Alioto Performing Arts Piazza, the proposed project would not be visually prominent or differ substantially in character from the existing skyline because of existing nearby high-rise buildings. Due to the greater distance between the project site and other open space areas, such as Howard and Langton Mini-Park, Victoria Manalo Draves Park, and Hayes Green, and the presence of intervening buildings, the upper floors of the proposed project may be visible from some locations in these parks, but the visible portion of the proposed project would constitute a small portion of the overall skyline. For this reason, the effects on views from these parks also would be less than significant.

The proposed project, at 16 stories, would be visible along Mission and Tenth Streets. Most views of the project site at street-level vantage points, including public sidewalks, are screened by intervening buildings. The project would not substantially alter views to the south along Tenth Street toward St. Joseph's Church, which is located one block south of the project site. Thus, the effect of the proposed project on views from street-level vantage points would be less than significant.

In summary, the proposed project would not be expected to substantially degrade or obstruct any scenic views or vistas, and this impact would be less than significant. For informational purposes, the project's effect on scenic vistas and views will be discussed in the EIR.

Scenic Resources

Scenic resources include resources of both the natural and built environment. The proposed project would not substantially damage any natural scenic resources, as none exists on the project site. Scenic resources of the built environment may include city landmarks that would be identified along a tour route, including, but not limited to, Coit Tower and the Golden Gate Bridge. The proposed project would not substantially damage scenic resources of the built environment, as none exist on the project site. The EIR will not discuss the proposed project's impact on scenic resources.

Views from Private Residences

The proposed project would be visible from some residential buildings in the area, including the second and third floors of the 122 Tenth Street building, adjacent to the project site to the south, the residential building at 154 Tenth Street farther south, the residential building at 1328 Mission Street, and the upper residential floors of the 98 Ninth Street building at the northwest corner of Ninth and Mission Streets. From all of these private residences, the proposed project could block views of the surrounding buildings and hills and portions of the sky. Reduced private views from some nearby residences would be an unavoidable consequence of the proposed project and would be an undesirable change for those individuals. Given the dense urban setting of the proposed project and the limited extent of the reduction in private views, the proposed project's impact on private views would not be considered a potentially significant environmental impact and will not be discussed in the EIR.

Visual Character

The immediate project vicinity is characterized by a variety of building heights and massing, building design, and land uses, ranging from traditional one- to seven-story buildings to the modern 30-story residential/commercial/office Fox Plaza tower one block north of the site (on Market Street), the 11-story office building at 875 Stevenson Street one-half block north of the site, and the six- to 20-story 1455 Market Street building one-half block west of the site. As mentioned above, St. Joseph's Church (1401 Howard Street), designated San Francisco Landmark Number 120, is located on the southwest corner of Tenth and Howard Streets, one block south of the proposed project site. There are scattered multi-family residential buildings, including the building immediately south of the proposed project at 122 Tenth

Street as well as buildings to the south and east, but most buildings in the vicinity are occupied by a variety of non-residential uses.

A number of projects are under construction, approved, or proposed in the project vicinity.

The following project in the project vicinity is under construction:

- the 17-story Argenta residential project is under construction at One Polk Street, under construction.

The following projects in the project vicinity have been approved:

- the 720-unit 1401 Market Street project at the southwest corner of Market and Tenth Streets,
- the Mercy Housing project at 9th and 10th Streets between Mission and Jessie Streets, which includes two affordable housing developments:
 - (1) a 123-foot-tall, 136-unit affordable family housing project at the northwest corner of Tenth and Mission Streets, and
 - (2) a 107-unit affordable senior housing project at Ninth and Jessie Streets,
- the 56-unit mixed use residential/office/retail project at 77 Van Ness located on the southwest corner of Van Ness Avenue and Fell Street, and
- the 1,900 unit mixed use residential/retail Trinity Project at 1177 Market Street located on the southeast corner of Market and Eighth Streets.

Three projects in the vicinity are under review:

- 120-foot-tall Fox Plaza residential project at Market and Hayes Streets;
- 137 affordable rental units at 1400 Mission Street, proposed by the Tenderloin Neighborhood Development Corporation (TNDC) and Citizen's Housing; and
- 260 dwelling units in a high-rise residential building at 55 Ninth Street, proposed by Argenta.

The majority of the buildings in the project vicinity are in the range of one to five stories, although there are a number of new, taller, and high-density commercial buildings up to 30 stories in height, and, as mentioned above, several buildings ranging in height up to 35 stories have been approved or are proposed in the vicinity of the project site.

The proposed building's height and form would reflect building types, heights, and massings of taller buildings found in the project vicinity, such as those discussed above. Allowable heights in the project area range from 40 to 320 feet. The façades of the proposed project would feature a combination of sections with glass curtain walls (which would include the ground-floor retail space) and sections with vertical walls articulated with windows and interspersed balconies. The appearance of the project would differ from early twentieth century buildings in the vicinity but the contemporary, rectilinear design and

ground-floor retail space of the proposed project would be consistent with the nearby late twentieth century buildings and approved high-rise buildings. The proposed project would add street trees along both the Mission and Tenth Street frontages, softening the street-level aesthetics of the proposed structure.

The proposed project would be among one of the taller structures in the neighborhood and would be visually prominent. The scale and massing of the proposed project would exceed that of most nearby buildings, but would be similar to the taller existing and approved buildings in the vicinity. Although the proposed building would be a visual change to the project site, the proposed project itself would not change the visual character of the existing neighborhood because the existing character is comprised of a variety of building heights and uses. The proposed project would be consistent with the neighborhood's transition in urban design towards taller buildings in the area.

Design and aesthetics are, by definition, subjective and open to interpretation by decision-makers and members of the public. A proposed project would therefore be considered to have a significant adverse effect on visual quality under CEQA only if it would cause a substantial and demonstrable negative change. The proposed project would not cause such a change. The proposed project's specific building design and aesthetic would be considered during the City's Planning approval and design review process. The proposed project would change the visual character of the project site, by replacing the site's one-story, 18-foot-tall building and 15-space surface parking lot with a mid-rise residential structure. Visual effects will be illustrated, depicted, and discussed in the EIR.

Light and Glare

The project site is currently occupied by a one-story commercial building and a paved parking area. The proposed project's construction of a 16-story, 150-foot tall residential and retail building would increase the level of lighting on the project site. Project lighting, visible from exterior vantage points, would consist of interior lighting of the residential lobby, garage entrance, and retail space on the ground floor, and interior lighting of the residential units on the upper floors. The project's lighting would be consistent with lighting typical of other high-rise buildings in the project vicinity. The proposed project would comply with Planning Commission Resolution 9212, which prohibits the use of mirrored or reflective glass. Exterior lighting would be consistent with similar lighting on surrounding land uses and the fixtures would be directed downward to minimize visible light on and off the project site. For these reasons, the proposed project would not generate obtrusive light or glare that would substantially impact other properties and would therefore not be a significant impact of the proposed project, and will not be analyzed further in the EIR.

Cumulative Effects

Cumulative effects on visual character will be analyzed in the EIR. The proposed project would not contribute to cumulative light and glare impacts in the area because the design of the proposed project would not use mirrored or reflective glass, as discussed above.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|---|---|---|---|-------------------------------------|---------------------------|
| 3. POPULATION AND HOUSING— | | | | | |
| Would the project: | | | | | |
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

The San Francisco Bay Area is known for its agreeable climate, open space, recreational opportunities, cultural amenities, a strong and diverse economy, and prominent educational institutions. As a regional employment center, San Francisco attracts people who want to live close to where they work. These factors continue to support a strong demand for housing in San Francisco. Providing new housing to meet this strong demand is particularly difficult because the amount of land available is limited and land and development costs are relatively high. For these reasons, San Francisco consistently ranks as one of the most expensive housing markets in the United States.

Annual housing production in the city during the period of 1990-2005, ranged from a low of about 380 units in 1993 to a high of about 2,700 units in 2003.³ The citywide annual average over that 16-year period was about 1,430 units. In March 2001, the Association of Bay Area Governments (ABAG) projected regional needs in the Regional Housing Needs Determination (RHND) 1999-2006 allocation and

³ San Francisco Planning Department, San Francisco 2005 Housing Inventory, October 2006. Available online at www.sfgov.org/planning (through Citywide Policy Planning), or a copy may be reviewed by appointment at the Planning Department (Citywide), 1650 Mission St, Suite 400, San Francisco.

calculated the jurisdictional need of the City as 20,327 dwelling units, or an average yearly need of 2,716 net new dwelling units. A draft of ABAG's 2007-2014 Resource Housing Needs Allocations (RHNA) was published July 24 and revised August 9, 2007. The 2007-2014 RHNA anticipates the need of the City as 31,189 dwelling units, or an average yearly need of 3,898.63⁴

Population Growth

The project site contains no dwellings or residents, but the attended parking facility on the site has two employees. The proposed project would replace the existing 5,000-square-foot commercial building (used as part of a parking facility) with approximately 156 residential units and approximately 2,200 square feet of retail/personal services space. Based on an average household size of 1.90 residents, the addition of 156 new studio, one-, and two-bedroom dwellings would accommodate an estimated 296 residents on the site,⁵ and the 2,200 square feet of retail/personal services space would add approximately six full-time employees.⁶ In addition, an estimated five janitorial/maintenance workers would be employed for the residential component of the building, which, added to the proposed project's residents and retail employees, would result in an estimated on-site population of about 307 people, or a net increase of about 305 people. While potentially noticeable to immediately adjacent neighbors, this increase would not result in a substantial impact on the population of the City and County of San Francisco. The 2000 U.S. Census indicates that the population in the project vicinity is approximately 4,640 persons.⁷ The proposed project would increase the population near the project site by approximately 6.6 percent, and the overall population of the City and County of San Francisco by approximately 0.04 percent.⁸

The nine net new employee positions on the project site would not likely attract new employees to San Francisco, but if so, would not be a substantial increase to housing demand in the City. The increase in the number of both residents and employees on the project site would not be a substantial increase to the area-wide population, as discussed above. The proposed project would be located in an established urban neighborhood, and the resulting density would not exceed levels that are common to urban areas, such as

⁴ Information ABAG's 2007-2014 Regional Housing Needs Allocation can be found at www.abag.ca.gov/planning/housingneeds, or by clicking on http://www.abag.ca.gov/planning/housingneeds/pdfs/RHNA_Allocations_and_Technical_Document.pdf. Accessed December 2007.

⁵ The project site is located in Census Tract 176.01, which according to Census 2000 data, has an average household size of 1.90 persons (1.89 per rental unit and 2.05 per owner-occupied unit). The citywide average household size for Census 2000 was 2.3 persons per household.

⁶ Based on 350 square feet per retail employee rate, consistent with the Planning Department's *Transportation Guidelines*, October 2002.

⁷ The population estimate is based on data from the 2000 Census for Census Tract 176.01.

⁸ This calculation is based on the estimated Census 2000 population of 776,733 persons in San Francisco.

San Francisco. The existing development on the project site is not residential, therefore the proposed project would not displace residents or housing units. In light of the above, the proposed project would not be expected to induce a substantial amount of growth, or create an additional substantial demand for housing. The proposed project's population and housing impacts would therefore, be less-than-significant under CEQA.

A major theme in the debate over land use changes in San Francisco is how planning and zoning actions can help meet San Francisco's acute need for affordable housing. The project would comply with the City's Affordable Housing Program, and approximately 12 percent of its units would be two-bedroom units, which could serve to house families. While San Francisco has an ongoing shortfall in production of affordable housing, the development of up to 133 market-rate residential units—along with 23 affordable housing units as required by the Residential Inclusionary Affordable Housing Program—on a former commercial site in an area of mixed land uses that include residential, and within a zoning district where housing is a conditionally permitted use, would not contribute considerably to any adverse cumulative impact related to a citywide shortfall in affordable housing. By providing affordable and market-rate housing, the proposed project would help meet the Citywide need for housing.

Cumulative Impacts

The 179 dwelling units of the Argenta project, which is under construction at One Polk Street, would accommodate an estimated 340 residents. The 720 dwelling units of the approved 1401 Market Street project would accommodate an estimated 1,368 residents, the 136 affordable dwelling units of the approved Mercy Housing project at the northwest corner of Tenth and Mission Streets would accommodate an estimated 258 residents, the 56 unit mixed use residential/office/retail building at 77 Van Ness would accommodate an estimated 106 residents, the 1,900 unit Trinity project would accommodate an estimated 3,610 residents, and the 107 affordable dwelling units of the approved Mercy Housing project at Ninth and Jessie Streets would accommodate an estimated 203 residents. Three projects in the vicinity are under review: Fox Plaza at Market and Hayes Streets, which would provide 250 dwelling units and accommodate an estimated 475 residents; 137 affordable rental units at 1400 Mission Street, proposed by the Tenderloin Neighborhood Development Corporation (TNDC) and Citizen's Housing, which would accommodate an estimated 260 residents; and 260 dwelling units at 55 Ninth Street, which would accommodate an estimated 494 residents. These under-construction, approved, and proposed projects, together with the proposed project, would add 7,421 people, increasing the population in the vicinity⁹ by approximately 160 percent, and the population of San Francisco by approximately, one

⁹ Census Tract 176.01.

percent. While the population in the site vicinity would nearly double, it is in an urban setting well-served by public amenities, fully capable of accommodating the increased population and would not necessitate infrastructure improvements. Additionally, the project listed above would serve to meet the City's housing needs. Therefore, cumulative impacts of development in the area would be less than significant. For informational purposes, project-specific and cumulative population and housing impacts will be discussed in the EIR.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|---|---|---|---|-------------------------------------|---------------------------|
| 4. CULTURAL AND PALEONTOLOGICAL RESOURCES— Would the project: | | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco <i>Planning Code</i> ? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of a archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Historic Architectural Resources

The existing one-story commercial (automotive service) building on the project site was constructed in approximately 1974 and is not listed in any survey or register of historic buildings. There are no designated landmarks or rated historic buildings on or adjacent to the project site, nor is the site within a historic district. Historic buildings in the project vicinity include St. Joseph's Church (1401 Howard Street, Designated San Francisco Landmark Number 120), located one block south of the proposed project site; the Orpheum Theater (1192 Market Street, Designated Landmark Number 94) located approximately three blocks to the northeast; the Path of Gold Light Standards (1-2490 Market Street, Designated Landmark Number 200), located as near as one block from the project site; the James Lick Baths (165 Tenth Street, Designated Landmark Number 246), located one-half block to the south; the Merchandise Mart (1301 Market Street, Category I in Article 11 of the *Planning Code*), located one block to the north; 201

Ninth Street (Category I in Article 11 of the *Planning Code*), located two blocks to the southeast; and the San Franciscan Hotel (1215 Market Street, Category II in Article 11 of the *Planning Code*), located three blocks to the northeast. None of these buildings would be affected by the proposed project. The proposed project would therefore not impact historic architectural resources, and this topic will not be discussed further in the EIR.

Archeological Resources

The proposed project would require excavation to a depth of approximately 37.5 feet for the four-level parking garage, and soils disturbance to a depth of approximately 45.5 feet below grade for a concrete mat foundation. The project site is underlain by variable depths of fill, ranging from approximately 5.5 to 7.5 feet. The project site is surrounded by recorded prehistoric sites of a wide range of types and periods.¹⁰ The project site does not appear to have been subject to any substantial improvement until 1949 when a service station occupied the site, and the native soils within the project site have been largely undisturbed except for the installation of underground gasoline storage tanks. Rather than removal of native soils, the site appears to have been filled at least partially with earthquake rubble. The project site is located upland, northwest of the former Sullivan Marsh area. Archeological resources present within the site would therefore have been preserved below or within fill deposits. With implementation of **Mitigation Measure 1, page 87**, which identifies a program of archaeological testing, monitoring, and data recovery, the proposed project's potential impact on CEQA-significant archeological resources, including human remains interred outside of formal cemeteries, would be reduced to a less-than-significant-level. Archeological resources, therefore, require no further analysis and will not be included in the EIR.

There are no known paleontological resources at the project site, and Mitigation Measure 1 would further reduce the project's impacts on paleontological resources. Therefore, the proposed project would not result in any adverse effects on paleontological resources. This topic will not be discussed further in the EIR.

¹⁰ Randall Dean, San Francisco Planning Department, Memorandum to Susan Mickelsen, Environmental Planner, San Francisco Planning Department, *Topic: Preliminary archaeological evaluation for project at 1415 Mission Street (2005.0540E)*, 7 May 2007.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|---|---|-------------------------------------|-------------------------------------|
| 5. TRANSPORTATION AND CIRCULATION – Would the project: | | | | | |
| a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways (unless it is practical to achieve the standard through increased use of alternative transportation modes)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Result in inadequate parking capacity that could not be accommodated by alternative solutions? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., conflict with policies promoting bus turnouts, bicycle racks, etc.), or cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity or alternative travel modes? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

The project site is not located near a public or private airport or within an airport land use plan area, therefore significance criterion 5(c) is not applicable. The proposed project does not include features that would substantially increase traffic-related hazards and the proposed project would be built within existing lot lines and would not impede emergency access. As a result, these potential impacts would be considered less-than-significant and will not be discussed further in the EIR.

The proposed project would increase the average daily on-site population from two existing employees to an estimated 307 persons (296 project residents, six retail/personal services employees, and five

janitorial/maintenance workers). The proposed project would increase traffic, transit, and parking demand in the area. Due to the magnitude of the proposed project's expected increase of on-site population, a transportation study is required to determine the proposed project's impact on transportation and circulation. The EIR will discuss the proposed project's potential individual and cumulative effects on traffic and circulation including intersection operations, transit demand, and impacts on pedestrian circulation, parking, including potential construction traffic impacts, and potential conflicts with adopted policies, plans, or programs supporting alternative transportation.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|---|---|--------------------------|-------------------------------------|
| 6. NOISE—Would the project: | | | | | |
| a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Result in exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Be substantially affected by existing noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

The project site is not within an airport land use plan area, nor is it in the vicinity of a private airstrip. Therefore criteria 6e and 6f are not applicable to the project site, and will not be discussed in the EIR.

Ambient noise and vibration levels in the project vicinity are typical of neighborhood noise levels in urban San Francisco, which are dominated by vehicular traffic including trucks, cars, MUNI buses, emergency vehicles; surrounding land use activities such as surrounding businesses; and temporary construction noise such as street repairs and other construction. The nearest sensitive receptors¹¹ to the project site would be nearby residents, including tenants of the building immediately south of the project site (122 Tenth Street), as well as 154 Tenth Street and 1328 Mission Street (both approximately one-half block from the project site) and 98 Ninth Street approximately one block from the project site.

Traffic Noise

Based on published scientific acoustic studies, traffic volumes would need to approximately double to produce a noticeable increase in ambient noise levels in the area. The increase of approximately 156 dwelling units, 78 to 136 parking spaces, and 2,200 square feet of commercial space would generate approximately 36 p.m. peak-hour vehicle trips.¹² This increase in vehicle trips is not likely to result in a doubling of traffic volumes in the area, which vary from 23,879 to 35,930 vehicles per day,¹³ Nevertheless, the EIR will analyze, project-specific, noise impacts related to traffic noise.

Building Equipment Noise

The proposed project would include new mechanical equipment, such as air conditioning units and chillers, which could produce operational noise. These operations would be subject to Section 2909 of Article 29 (the Noise Ordinance) of the San Francisco *Police Code* that limits noise from building operations. Substantial increases in the ambient noise level due to building equipment noise of the proposed project would not be anticipated. The proposed project would therefore, result in a less-than-significant operational noise impact and this topic will not be discussed in the EIR.

Interior Noise

The proposed project would be subject to Title 24 of the California Code of Regulations that establishes uniform noise insulation standards for residential structures. Title 24 requires that residential structures (other than detached single-family dwellings) be designed to prevent the intrusion of exterior noise so

¹¹ Sensitive receptors include children, the elderly, and those with heightened sensitivity to noise due to illness.

¹² CHS Consulting Group, *1415 Mission Street Project Transportation Study, Case No: 2005.0540E, Draft Report*, April 28, 2006. This report is on file and available for public review by appointment at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, as part of the project file 2005.0540E.

¹³ Daily volumes at the intersection of Mission and Tenth streets vary from 23,879 to 35,930, per: San Francisco Department of Parking and Traffic, *Traffic Counts*, <http://www.sfgov.org/site/frame.asp?u=http://www.sfmta.com>, viewed 29 August 2007.

that the noise level with windows closed, attributable to exterior sources, shall not exceed 45 dBA in any habitable room. This standard is consistent with the City of San Francisco's Noise Element Policies for indoor residential use. For areas with background noise levels between 60 and 70 decibels, the *San Francisco General Plan* states that "new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design."¹⁴ Background noise levels have been measured at approximately 65 decibels.¹⁵ To ensure that occupants of the proposed residential units would not be adversely affected by proximity to traffic noise, noise insulation measures would be included as part of the design for the proposed project, as required by Title 24. The Department of Building Inspection (DBI) would review the final building plans to ensure that the building wall and floor/ceiling assemblies meet Title 24 standards regarding sound transmission. If determined necessary by DBI to assure that the design would meet the interior noise level goal, a detailed acoustical analysis of the exterior wall architecture/structure could be required. With compliance with Title 24 noise insulation requirements, the existing noise environment would not significantly affect future occupants. The proposed project would therefore, result in a less-than-significant interior noise impact and this topic will not be discussed in the EIR.

Construction Noise

Demolition, excavation, and project construction would temporarily and intermittently increase noise and possibly vibration levels near the project site and may be considered an annoyance by occupants of nearby properties. During construction activity, which would take approximately 20 months, noise and vibration levels would be above existing levels in the project area and there would be times when construction noise could interfere with indoor activities in nearby residences, offices, and other businesses near the project site. Construction noise and vibration levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between noise source and listener, and presence or absence of barriers. Construction noises associated with the proposed project would include demolition, excavation, truck traffic, foundation construction, steel erection, and finishing. Of these, demolition, excavation, site work, and erection of the new building's exterior would likely generate the most construction-related noise. Throughout the construction period there would be truck traffic to and from the site, hauling excavated materials and debris, or delivering building materials. It is anticipated that the construction hours would be normal working hours during the week, with possible work during nights or weekends.

¹⁴ *San Francisco General Plan*, Environmental Protection Element, Land Use Compatibility Chart for Community Noise.

¹⁵ *San Francisco General Plan*, Environmental Protection Element, Map 1, Background Noise Levels, 1974.

The San Francisco Noise Ordinance (Article 29 of the Police Code) regulates construction-related noise and is enforced by the Department of Building Inspection during normal business hours and the Police Department during all other hours. The noise ordinance requires that: 1) noise levels from individual pieces of construction equipment, other than impact tools, not exceed 80 dBA¹⁶ at a distance of 100 feet from the source (the equipment generating the noise), 2) impact tools, such as jackhammers, must have both the intake and exhaust muffled to the satisfaction of the Director of the Department of Public Works (DPW); and 3) if the noise from the construction work would exceed the ambient noise levels at the property line of the site by five dBA, the work must not be conducted between 8:00 p.m. and 7:00 a.m., unless the Director of DPW authorizes a special permit for conducting the work during that period. The increase in noise in the project area during the proposed project's construction would, therefore, not be considered a significant project-specific impact because it would be temporary, intermittent, and restricted in occurrence and level, and the contractor would be required to comply with the City's Noise Ordinance.

The proposed project is anticipated to include a concrete piling foundation, and would therefore not use pile driving. As a result, the proposed project would not create unusual levels of ground borne vibration that would disturb nearby residents or businesses, and vibration impacts would be less than significant.

Cumulative Effects

The proposed project's construction activities would be temporary in nature, and construction-related ambient noise level increases at locations greater than a few hundred feet from the project site would be incrementally small. As stated above, required construction noise reduction measures would be implemented in accordance with standard City practice for the proposed project, and other construction would be required to follow the same measures. Because the decibel and the dBA scales are logarithmic,¹⁷ noise generating activities have to double for there to be an apparent increase in noise, and noise attenuates with distance. Given that many of the projects under the cumulative scenario are already under construction or approved and would presumably be finished with construction before the proposed project's construction began, and that the distance between the project site and other projects currently under review is in the hundreds of feet, cumulative construction noise would be less-than-significant and the EIR will not address cumulative construction noise.

¹⁶ dBA is the symbol for decibels using the A-weighted scale. A decibel is a unit of measurement for sound loudness (amplitude). The A-weighted scale is a logarithmic scale that approximates the sensitivity of the human ear.

¹⁷ If one individual piece of construction equipment were operating at maximum permitted dBA—80 dBA at some point 100 feet away, and a second piece of equipment at a second project emitted the equivalent at the same time, the combined dBA at that point would be 83, a difference of 3 dBA.

As noted above in the transportation section, the Draft EIR will evaluate how much traffic will increase under the cumulative scenario including projects currently under construction, approved, or proposed. The Draft EIR will, therefore, evaluate the cumulative noise impacts resulting from increased traffic within the project vicinity.

In summary, interior, building equipment, project-specific traffic noise, and construction noise impacts of the proposed project would be considered less than significant. Cumulative traffic noise impacts could be potentially significant and, will therefore be analyzed in the EIR.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|---|---|-------------------------------------|---------------------------|
| 7. AIR QUALITY | | | | | |
| Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: | | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

The Federal Clean Air Act (CAA), as amended, and the California Clean Air Act (CCAA) legislate ambient air standards and related air quality reporting systems for regional regulatory agencies to develop mobile and stationary source control measures to meet the standards. The Bay Area Air Quality Management District (BAAQMD) is the primary responsible regulatory agency in the Bay Area for

planning, implementing, and enforcing the federal and state ambient standards for criteria pollutants.¹⁸ Criteria air pollutants include ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM₁₀ and PM_{2.5}) and lead.

The San Francisco Bay Area Air Basin encompasses the following counties: San Francisco, Alameda, Contra Costa, Marin, San Mateo, Napa and parts of Solano and Sonoma Counties. The basin has a history of air quality violations for ozone, carbon monoxide, and particulate matter and currently does not meet the state ambient air quality standards for ozone, PM₁₀ and PM_{2.5}.¹⁹ The BAAQMD has adopted air quality management plans over the years to address control methods and strategies to meet air quality standards, the latest being the *Bay Area 2000 Clean Air Plan*, *2001 Ozone Attainment Plan*, and *2005 Bay Area Ozone Strategy*.

Operation Emissions

"Greenhouse Gas" Emissions

Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs). Both natural processes and human activities emit GHGs. The accumulation of GHGs in the atmosphere regulates the earth's temperature; however, emissions from human activities such as electricity production and vehicles have elevated the concentration of these gases in the atmosphere. This accumulation of GHGs has contributed to an increase in the temperature of the earth's atmosphere and contributed to climate change. The principal greenhouse gases are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. Carbon dioxide is the "reference gas" for climate change, meaning that emissions of GHGs are typically reported in "carbon dioxide equivalent" measures.²⁰

Of the principal gases, carbon dioxide (CO₂) and methane are emitted in the greatest quantities from human activities. Emissions of carbon dioxide are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs—with much greater heat-absorption potential than CO₂—include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. There is international scientific

¹⁸ State and Federal air quality standards and the Bay Area's attainment status can be viewed on the BAAQMD website at <http://www.baaqmd.gov>.

¹⁹ Ibid.

²⁰ Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

consensus that human-caused increases in GHGs has and will continue to contribute to global warming, although there is much uncertainty concerning the magnitude and rate of the warming.

The California Energy Commission estimated that in 2004 California produced 500 million gross metric tons (about 550 million U.S. tons) of CO₂-equivalent GHG emissions. The CEC found that transportation is the source of 38 percent of the State's GHG emissions, followed by electricity generation (both in-state and out-of-state) at 23 percent and industrial sources at 13 percent.²¹

In the Bay Area, fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of the Bay Area's GHG emissions, accounting for just over half of the Bay Area's 85 million tons of GHG emissions in 2002. Industrial and commercial sources were the second largest contributors of GHG emissions with about one-fourth of total emissions. Domestic sources (e.g., home water heaters, furnaces, etc.) account for about 11 percent of the Bay Area's GHG emissions, followed by power plants at seven percent. Oil refining currently accounts for approximately six percent of the total Bay Area GHG emissions.²²

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which sets forth a series of target dates by which statewide emissions of GHG would be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32; California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), which requires the ARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

In February 2002, the San Francisco Board of Supervisors passed the Greenhouse Gas Emissions Reduction Resolution, committing the City and County of San Francisco to a GHG emissions reductions goal of 20 percent below 1990 levels by the year 2012. In September 2004, the San Francisco Department of the Environment and the San Francisco Public Utilities Commission published the Climate Action Plan

²¹ California Energy Commission, Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004 -Final Staff Report, publication # CEC-600-2006-013-SF, December 22, 2006; and January 23, 2007 update to that report. Available on the internet at: <http://www.arb.ca.gov/cc/ccei/emsinv/emsinv.htm>.

²² BAAQMD, Source Inventory of Bay Area Greenhouse Gas Emissions: Base Year 2002, November 2006. Available on the internet at: http://www.baaqmd.gov/pln/ghg_emission_inventory.pdf.

for San Francisco: Local Actions to Reduce Greenhouse Emissions (Plan).²³ Although the Board of Supervisors has not formally committed the City to perform the actions addressed in the Plan, and many of the actions require further development and commitment of resources, it serves as a blueprint for GHG emission reductions.

Implementation of the proposed 1415 Mission Street Project would contribute to long-term increases in GHGs as a result of traffic increases (mobile sources) and residential and commercial building heating (area sources), as well as indirectly, through electricity generation. The project's incremental increases in GHG emissions associated with traffic increases and space heating would contribute to regional and global increases in GHG emissions and associated climate change effects. Neither the BAAQMD nor any other agency has adopted significance criteria or methodologies for estimating a project's contribution of GHGs or evaluating its significance. However, development of a single project could not generate sufficient emissions of GHGs to result in a significant impact in the context of the cumulative effects of GHG emissions such that it would impair the state's ability to implement AB32.

As new construction, the residential portion of the proposed project would be required to meet California Energy Efficiency Standards for Residential and Nonresidential Buildings, helping to reduce future energy demand as well as reduce the project's contribution to cumulative regional GHG emissions. Any conclusion regarding the effect of the project's incremental contribution to cumulative GHG emissions levels is speculative, and therefore no determination of significance can be made at this time.

However, in an effort to identify an individual project's contribution to GHG emissions, the EIR will provide a quantitative analysis of the proposed project's expected GHG emissions.

Other Emissions

The proposed project would affect local air quality by increasing vehicular traffic on nearby streets, and by adding stationary emissions (mechanical equipment) to the project site. According to the BAAQMD, vehicles are the primary source of operational project-related emissions.²⁴ The BAAQMD has established thresholds for projects requiring its review for potential air quality impacts.²⁵ These thresholds are based on the minimum size projects that the BAAQMD considers capable of producing cumulative air quality problems due to vehicular emissions. The BAAQMD generally does not recommend a detailed air quality

²³ San Francisco Department of the Environment and San Francisco Public Utilities Commission, Climate Action Plan for San Francisco, Local Actions to Reduce Greenhouse Emissions, September 2004.

²⁴ Bay Area Air Quality Management District, BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans, December 1999.

²⁵ Ibid, page 25.

analysis for residential projects with fewer than 320 single-family or 510 multi-family units, or projects that would generate fewer than 2,000 vehicle trips per day. The proposed project's 156 dwelling units and 2,200 square feet of retail/personal services space would generate an estimated 233 daily vehicle trips.²⁶ Therefore, the proposed project would not exceed the BAAQMD thresholds requiring a detailed air quality analysis.

Additional stationary source emissions, generated by mechanical equipment, and the combustion of natural gas for building space and water heating would be relatively minimal, and would therefore be considered less than significant. The proposed project would not violate any BAAQMD ambient air quality standard or contribute substantially to an existing or projected air quality violation. For all of the above reasons, the proposed project would not generate significant operational air quality impacts.

The proposed project would be generally consistent with the *General Plan* and such air quality management plans as the *Bay Area 2000 Clean Air Plan*, and the *Bay Area 2005 Ozone Strategy*. Additionally, the *General Plan*, *Planning Code*, and City Charter implement various transportation control measures identified in the *2005 Ozone Strategy* through the City's "Transit First" Program, bicycle parking requirements, transit development fees, and other actions. Accordingly, the proposed project would not contribute considerably to cumulative air quality impacts, nor would it interfere with implementation of the *2005 Ozone Strategy* or the *2001 Ozone Attainment Plan*, which are the applicable regional air quality plans developed to improve air quality towards attaining the state and federal ambient air quality standards. As such the operational characteristics of the proposed project would not result in cumulatively considerable increases in regional air pollutants.

Odors

The proposed project would not result in a perceptible increase or change in odors on the project site or in the vicinity of the proposed project, as it would not include uses prone to the generation of objectionable odors. Observation indicates that surrounding land uses are not sources of objectionable odors that would adversely affect project residents, and therefore would not adversely affect the proposed project's residents.

²⁶ CHS Consulting Group, 1415 Mission Street Project Transportation Study, Case No: 2005.0540E, Draft Report, April 28, 2006. This report is on file and available for public review by appointment at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, as part of the project file 2005.0540E.

Construction Emissions

Site preparation activities, such as excavation, grading, foundation construction, and other ground-disturbing construction activity would affect localized air quality during the construction phases. The movement of heavy equipment would create fugitive dust (particulate matter including PM₁₀ and PM_{2.5}) and other pollutants related to diesel fuel combustion. Construction activities, in particular soil movement for foundation excavation and site grading lasting approximately five months, would create the potential for wind-blown dust adding particulate matter into the local atmosphere near the project site. Although more of a nuisance than a health hazard to most people, the dust could affect persons with respiratory diseases immediately downwind of the site, as well as any sensitive electronics or communications equipment. Seniors, children or other potentially sensitive receptors near the proposed project may be exposed to airborne dust associated with demolition and ground-disturbance activities. The BAAQMD, in its *CEQA Guidelines*, has identified a set of PM₁₀ and PM_{2.5} control measures for construction activities such as twice daily watering of exposed soil areas, daily sweeping of surrounding streets, covering of construction vehicle loads, and on-going construction truck maintenance to minimize exhaust emissions. In order to reduce the quantity of dust generated during site preparation and construction, the project sponsor has agreed to implement **Mitigation Measure 2** listing the BAAQMD PM₁₀ control measures (see Section F. Mitigation Measures, page 87). With the implementation of **Mitigation Measure 2**, construction-related air quality impacts of the proposed project would be reduced to a less-than-significant level.

Cumulative Impacts

The BAAQMD neither recommends quantified analysis of cumulative construction emissions nor provides thresholds of significance that could be used to assess cumulative construction emissions. The construction industry, in general, is an existing source of emissions within the Bay Area. Construction equipment operates at one site on a short-term basis, and when finished, moves on to a new construction site. Because construction activities would be temporary, the contribution to the cumulative context is so small as to be virtually immeasurable, and all of the appropriate and feasible construction-related measures recommended by the BAAQMD would be implemented (see **Mitigation Measure 2**). Accordingly, the contribution of construction emissions associated with the proposed project would not be cumulatively considerable.

In terms of cumulative local impacts, CO concentrations are expected to be lower under cumulative conditions than existing conditions, even with increased traffic and degradation in level of service at some intersections, because improved vehicle emission controls have continuously lowered CO emissions

in recent years and are anticipated to continue to do so as older vehicles continue to leave the statewide fleet. Therefore, cumulative CO impacts from increased traffic would be less than significant.

Conclusion

As discussed above, the proposed project would not conflict with applicable air quality plans, would not create significant operational or cumulative airborne emissions, and would not create objectionable odors. With the implementation of **Mitigation Measure 2, page 91**, the proposed project's construction-related air quality impacts would be reduced to a less-than-significant level. For informational purposes, the EIR will provide a quantitative GHG analysis. However, all air quality impacts have been mitigated to a less-than-significant impact and will not be discussed in the EIR.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|---|---|--------------------------|---------------------------|
| 8. WIND AND SHADOW—Would the project: | | | | | |
| a) Alter wind in a manner that substantially affects public areas? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Wind

Large buildings can redirect wind flows around and down to street level, resulting in increased wind speed and turbulence at the street level. To provide a comfortable wind environment, the City established comfort criteria for evaluation of proposed buildings.²⁷ The pedestrian comfort criteria are based on pedestrian-level wind speeds, which include the effects of turbulence. These adjusted wind speeds are referred to as "equivalent wind speeds." The *Planning Code* establishes an equivalent wind speed of seven miles per hour in seating areas and eleven miles per hour in areas of substantial pedestrian use as comfort criteria. New buildings and new additions to buildings may not cause ground-level winds to exceed these levels more than ten percent of the time year-round between 7:00 a.m. and 6:00 p.m. If existing wind speeds exceed the comfort level, new buildings and additions must be designed to reduce ambient wind speeds to meet these requirements. An exception to this requirement may be permitted but only if and to

²⁷ The *Planning Code* specifically outlines these criteria for several districts within the city. For CEQA purposes, the provisions of Section 148 apply city-wide, as described here.

the extent that the project sponsor demonstrates that the building or addition cannot be shaped to minimize ground level wind or wind-baffling measures cannot be adopted without unduly restricting the development potential of the building site in question. The *Planning Code* also establishes a hazard criterion at an equivalent wind speed of 26 miles per hour for a single full hour per year. No building or additions to buildings would be permitted that would cause wind speeds to exceed the hazard level for more than one hour of any year. A wind analysis will be performed and the effects of the proposed project will be compared to the applicable criteria. The EIR will therefore, analyze the project's effects on existing wind conditions.

Shadow

The proposed project would shade adjacent properties, but would not increase the total amount of shading in the neighborhood above levels which are common and generally accepted in urban areas. Section 295 of the *Planning Code* was adopted in response to Proposition K (passed November 1984) in order to protect certain public open spaces from shadowing by new structures during the period between one hour after sunrise and one hour before sunset, year round. *Planning Code* Section 295 restricts net new shadow on public open spaces under the jurisdiction of, or to be acquired by, the Recreation and Park Department, by any structure exceeding 40 feet, unless the Planning Commission, in consultation with the Recreation and Park Commission, finds the impact to be less than significant. The nearest public open space in the vicinity of the project site under the jurisdiction of the Recreation and Park Department is the Joseph L. Alioto Performing Arts Piazza, located two blocks north of the project site. To determine whether this proposed project would conform to Section 295, a shadow fan study was prepared by the Planning Department.²⁸ The shadow fan study indicated that the proposed project does not have the potential to cast new shadow on the Joseph L. Alioto Performing Arts Piazza.

However, public open space not under Recreation and Park Department jurisdiction could be affected by the proposed project. A detailed shadow study was prepared and will be discussed in the EIR.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|----------------|---|---|---|----------------------|---------------------------|
| | | | | | |

²⁸ San Francisco Planning Department, letter dated August 23, 2007 (Case No. 2005.0540K), 1415 Mission Street, Shadow Analysis. A copy of this document is available for review, by appointment, at the Planning Department, 1650 Mission Street, San Francisco, in File No. 2005.0540E.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|---|---|-------------------------------------|---------------------------|
| 9. RECREATION – Would the project: | | | | | |
| a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Physically degrade existing recreational resources? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

The San Francisco Recreation and Park Department administers more than 200 parks, playgrounds, and open spaces throughout the City. System recreation facilities also include 15 recreation centers, 9 swimming pools, 5 golf courses, and more than 300 athletic fields, tennis courts, and basketball courts.²⁹ Recreation facilities within 0.5 miles the project site include the Joseph L. Alioto Performing Arts Piazza (Civic Center Plaza) located three blocks north of the site in the block bounded by Polk, McAllister, Larkin, and Grove Streets; Howard and Langton Mini-Park located approximately four blocks east of the site on Howard Street between Seventh and Eighth Streets; Victoria Manalo Draves Park located approximately five blocks east of the site on Folsom Street between Sixth and Seventh Streets; the Bessie Carmichael Park located on Seventh Street between Folsom and Harrison Streets, approximately five blocks east of the site; and Hayes Green (also known as Patricia's Garden), located on Octavia Street between Fell and Hayes Streets, approximately five blocks to the west. Within one mile of the site are two recreation centers: the Eugene Friend Recreation Center east of the project site on Sixth Street at Folsom Street, and the Hayes Valley Center west of the project site at Hayes and Buchanan Streets.³⁰

The Recreation and Open Space Element (Open Space Element) in the *General Plan* notes that "While the number of neighborhood parks and facilities is impressive, they are not well distributed throughout the City...The [unequal distribution] merits correction where neighborhoods lacking parks and recreation

²⁹ San Francisco Recreation and Park Department, http://www.parks.sfgov.org/site/recpark_index.asp?id=24168, accessed December 4, 2007; San Francisco Recreation and Park Department, Recreation Assessment Report, August 2004, page 21, at http://www.parks.sfgov.org/wcm_recpark/Notice/SFRP_Summary_Report.pdf, accessed December 4, 2007.

³⁰ San Francisco Recreation and Park Department, Recreation Assessment 2004, Maps, at http://www.parks.sfgov.org/site/recpark_index.asp?id=27310, accessed December 4, 2007. The Hayes Valley Center, less than one mile to the west of the project site is a Level 3 facility, and the Eugene Friend Recreation Center, less than one mile to the east of the project site is a Level 5 facility. Level 3 facilities offer clubhouses, fields, and after-school programs; Level 5 facilities offer gymnasiums, auditoriums, lights, and fields.

facilities also have relatively high needs for such facilities." The Open Space Element defines "high needs areas" as areas with high population density or high percentages of children, seniors, or low-income households relative to the City as a whole. The Open Space Element defines "deficient" areas as areas that are not served by public open space, areas with population that exceeds the capacity of the open spaces that serve it, or areas with facilities that do not correspond well to neighborhood needs.

The high need areas and deficient areas are shown in Figures 3 through 8 and Map 9 of the Open Space Element, and are based on information from the 1980 U.S. Census. The figures show that the 1415 Mission Street project site is within a "high need" area based on household income, and is not within a "high need" area based on overall population density, density of children, or density of seniors. The *General Plan* figures also show the project site to be underserved by public open space. Draft updated versions of the maps reflecting 2000 U.S. Census data show that the project site is still within an area considered "high need" according to the Open Space Element criteria for household income, and is not within a "high need" area based on overall population density, density of children, or density of seniors. The updated maps designate the area of the project site as high priority for recreation and open space improvements, but do not designate the project site as having service gaps, although the area immediately south and west of the project site is identified as having service gaps.³¹

In August 2004, the San Francisco Recreation and Park Department published a Recreation Assessment Report that evaluates the recreation needs of San Francisco residents. Nine service area maps were developed for the Recreation Assessment Report. The service area maps were intended to help Recreation and Park Department staff and key leadership assess where services are offered, how equitable the service delivery is across the City, and how effective the service is as it applies to the demographics of the service area. The maps (which were developed based on population served rather than distance) show that the project site is not within the service area for the nearest outdoor baseball or softball fields, multi-use fields or soccer pitches, swimming pools, recreation centers, or basketball or tennis courts. Compared to the standards recommended in the report, additional ball fields, multi-use/soccer fields, and outdoor basketball courts are needed for the City as a whole. Parts of District 6, the supervisorial district in which the project site is located, are considered underserved by recreation facilities. The project site is adjacent

³¹ San Francisco Recreation and Park Department, *Recreation and Park Acquisition Policy*, Second Public Draft, November 7, 2005, attached as Appendix C to the 2005 Capital Plan Update, http://parks.sfgov.org/site/capimp_index.asp?id=36403, accessed December 5, 2007.

to, but not within, the service area of the Edward Friend Recreation Center, and is outside the service area of the Hayes Valley Recreation Center, both listed above.³²

The proposed project would increase the on-site population by approximately 305 persons, and would provide approximately 3,375 sq.ft. of common usable open space at the penthouse (roof) level for the private use of residents. The proposed project would increase the demand for park and recreation facilities in the area, including those listed above, but the proposed project's increase in residents and employees would not be considered a substantial contribution to the existing high demand for public recreational facilities in this area and would not result in substantial physical deterioration of existing recreational resources.

Cumulative Effects

As discussed on page 42, current projects under construction, approved and proposed projects would increase the population of the project vicinity by approximately 7,421 persons, and contribute to a cumulative increase in demand for recreation facilities. The proposed project represents approximately four percent of this cumulative increase to the already high demand for recreation facilities in the vicinity.

As discussed above, the project vicinity is already identified in the *San Francisco General Plan* as a High Need Area (to be given the highest priority) for recreational facilities and improvements; therefore, the proposed project would not make a substantial cumulative contribution to the existing identified need for recreational facilities and improvements.

In summary, the proposed project would have a less than significant impact with regard to recreation and this topic will not be discussed in the EIR.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|---|---|---|---|-------------------------------------|---------------------------|
| 10. UTILITIES AND SERVICE SYSTEMS—Would the project: | | | | | |
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

³² San Francisco Recreation and Park Department, Recreation Assessment 2004, pp. 20-23 and Maps, at http://parks.sfgov.org/site/recpark_index.asp?id=27310, accessed December 5, 2007.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|---|---|-------------------------------------|---------------------------|
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

The project site is within an urban area that is served by utility service systems, including water, wastewater and storm water collection and treatment, and solid waste collection and disposal. The proposed residential and retail building would increase demand for and use of such utilities and services, but not in excess of amounts expected and provided for in the area.

Wastewater and Stormwater Service

The project site is served by San Francisco's combined sewer system, which handles both sewage and stormwater runoff. The Southeast Water Pollution Control Plant (Southeast Plant) provides wastewater and stormwater treatment and management for the east side of the city, including the project site. No major new sewer or stormwater facilities or construction would be needed to serve the proposed project. The proposed project would meet the wastewater pre-treatment requirements of the San Francisco Public Utilities Commission, as required by the San Francisco Industrial Waste Ordinance in order to meet

Regional Water Quality Control Board requirements.³³ The 156 residential units of the proposed project would generate approximately 17,940 gallons of wastewater per day and the 2,200 square feet of retail space would generate a smaller amount.³⁴ The proposed project would not substantially increase the amount of stormwater runoff because the site is currently covered with impervious surfaces. While the proposed project would add to wastewater flows from the project site, it would not cause collection treatment capacity of the sewer system to be exceeded. The proposed project would therefore not substantially increase the demand for wastewater or stormwater treatment and would result in a less-than-significant wastewater service impact, and therefore will not be discussed in the EIR.

Water Service

The proposed project, with approximately 296 residents and eleven retail/personal services and janitorial/maintenance employees, would consume an estimated 19,914 gallons of water per day.³⁵ The parking facility on the site currently consumes an estimated 160 gallons of water per day.³⁶ Although the proposed project would incrementally increase the demand for water in San Francisco, the estimated increase in demand could be accommodated within anticipated water use and supply for San Francisco.³⁷ The new construction would also be designed to incorporate water-conserving measures, such as low-flush toilets and urinals, as required by the *California State Building Code* Section 402.0(c). As discussed under the Air Quality topic, during project construction, the project sponsor and project building contractor must comply with Ordinance 175-91, passed by the Board of Supervisors on May 6, 1991, which requires that non-potable water be used for dust control activities. Since the proposed project's water demand could be accommodated by the existing and planned supply anticipated under the San Francisco Public Utility Commission's 2005 UWMP and would use best-practice water conservation

³³ City and County of San Francisco, Ordinance No. 19-92, San Francisco Municipal Code (Public Works), Part II, Chapter X, Article 4.1 (amended), January 13, 1992.

³⁴ The residential wastewater estimate for the proposed project is 115 gallons x 156 units or 17,940 gallons per day. The estimate of 115 gallons per day per household of wastewater is based on water consumption estimates, which are consistent with water use assumptions incorporated within the San Francisco Public Utility Commission's Year 2000 Urban Water Management Plan.

³⁵ Based on current residential use in San Francisco of 62 gallons per capita per day and on an estimate of 80 gallons per employee-day (GED), (SFPUC, 2005 Urban Water Management Plan for the City and County of San Francisco (UWMP), December 2005 [2005 UWMP], pp. 40 and 41), available at www.sfwater.org. (62 gallons per day * 307 facility occupants = approximately 19,034 gallons of water demand per day, and 80 GED * 11 employees = 880 gallons of water demand per day.) The 2005 UWMP is available at www.sfwater.org, accessed for this report December 6, 2007.

³⁶ See footnote above. Based on conservative estimate of 80 gallons per employee-day (GED) (SFPUC, 2005 Urban Water Management Plan for the City and County of San Francisco (UWMP), December 2005, page 41, available at www.sfwater.org. (80 gallons per day GED * 2 employees = approximately 160 gallons of water demand per day.)

³⁷ San Francisco Public Utility Commission, 2005 UWMP. The 2005 UWMP uses the San Francisco Planning Department's current long range growth projections – Land Use Allocation 2002 –, an estimate of total growth expected in the City and County of San Francisco from 2000 – 2025. These projections have similar employment growth and approximately 15,000 higher household growth than ABAG Projections 2002.

devices, the proposed project would result in less-than-significant project-specific and cumulative water impacts and this topic will not be discussed in the EIR.

Solid Waste

According to the California State Integrated Waste Management Act of 1989, San Francisco is required to adopt an integrated waste management plan, implement a program to reduce the amount of waste disposed, and have its waste diversion performance periodically reviewed by the Integrated Waste Management Board. Reports filed by the San Francisco Department of the Environment showed the City generated 1.88 million tons of waste material in 2002. Approximately 63 percent (1.18 million tons) was diverted through recycling, composting, reuse, and other efforts while 700,000 tons went to a landfill. The diversion percentage increased in 2002 from 52 percent in 2001.³⁸ Additionally, the City has a goal to divert most (75 percent) of its solid waste (through recycling, composing, etc.) by 2010 and to divert all waste by 2020.³⁹

Solid waste from the project site would be collected by Sunset Scavenger Company and hauled to the Norcal transfer station near Candlestick Point, and recycled as feasible, with non-recyclables being disposed of at the Altamont Landfill in Alameda County where it is required to meet federal, state and local solid waste regulations. The Altamont Landfill has a permitted maximum disposal of 6,000 tons per day and received about 1.34 million tons of waste in 2002 (the most recent year reported by the State). The total permitted capacity of the landfill is more than 124 million cubic yards; with this capacity, the landfill can operate until 2025.⁴⁰ Although the increased residential population and commercial activity resulting from the project and other development in the area would incrementally increase total waste generation from the City, the increasing rate of diversion through recycling and other methods would result in a decreasing share of total waste that requires deposition into the landfill. Given this, and given the long-term capacity available at the Altamont Landfill, the solid waste generated by project construction and operation would not result in the landfill exceeding its permitted capacity, and the project would result in

³⁸ City and County of San Francisco, Office of the Controller, Community Indicators Report, http://www.sfgov.org/wcm_controller/community_indicators/physicalenvironment/recycling/recycling.htm, accessed on December 6, 2007.

³⁹ "SF Green Ambitions," *Boston Globe*, December 14, 2007. Article available on the [sfenvironment.org](http://www.sfenvironment.org) website or by clicking on http://www.sfenvironment.org/our_sfenvironment/news.html?topic=details&ni=268. Accessed for this report December 19, 2007.

⁴⁰ California Integrated Waste Management Board, Active Landfill Profiles, Altamont Landfill, <http://www.ciwmb.ca.gov/Profiles/Facility/Landfill/LFProfile1.asp?COID=3&FACID=01-AA-0009>, accessed December 6, 2007.

a less-than-significant effect, both project-specific and cumulatively when considered with other development in the area. For these reasons, solid waste will not be discussed in the EIR.

Conclusion

No new water delivery or wastewater collection and treatment facilities would be required to serve the proposed project. The proposed project's solid waste would be recycled as feasible at the Norcal transfer station, with non-recyclables disposed of at the Altamont Landfill, where adequate capacity exists to serve existing and future needs of San Francisco. The proposed project would incrementally increase the demand for water, wastewater, and other utilities on-site, but not in excess of anticipated demand projected for the City of San Francisco. Therefore, the proposed project would result in a less-than-significant utilities and service systems impact and this topic will not be discussed in the EIR.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|---|---|---|---|--------------------------|---------------------------|
| 11. PUBLIC SERVICES— Would the project: | | | | | |
| a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other services? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Fire Protection

The project site receives fire protection services from the San Francisco Fire Department (SFFD). The nearest fire station, Station 36, is located approximately three blocks to the west at 109 Oak Street. The SFFD is made up of 1,629 uniformed firefighters, paramedics, officers, and inspectors. The SFFD has adequate personnel to meet the needs of the residents and visitors to San Francisco.⁴¹

⁴¹ Joanne Hayes-White, Chief of Department, and Andy Zarioff, Office of the Deputy Chief of Administration, San Francisco Fire Department, written communication with Aubrey Refuerzo, PBS&J, April 11, 2007. This letter is on file and available for public review by appointment as part of Case File No. 2006.1073E.

Although the proposed project would increase the number of calls received from the area or the level of regulatory oversight that must be provided as a result of the increased concentration of activity on site, the increase in responsibilities would not be substantial in light of existing demand for fire protection services.

Furthermore, the proposed project would be required to comply with all applicable building and fire codes, which establish requirements pertaining to fire protection systems, including, but not limited to, the provision of state-mandated smoke alarms, fire alarm and sprinkler systems, fire extinguishers, required number and location of egress with appropriate distance separation, and emergency response notification systems. Since the proposed project would be required to comply with all applicable building and fire codes, and the proposed project would result in an incremental increase in demand, it would not result in the need for new fire protection facilities, and would not result in significant impacts to the physical environment. Hence, the proposed project would have a less-than-significant impact on fire protection services and the EIR will not discuss this topic further.

Police Protection

As discussed above, development of the project would increase visitors to the project site, which could incrementally increase police service calls in the project area. Police protection is provided by the Southern Police Station located at 850 Bryant Street, approximately seven blocks to the east. Although the proposed project could increase the number of calls received from the area or the level of regulatory oversight that must be provided as a result of the increased concentration of activity on site, the increase in responsibilities would not likely be substantial in light of existing demand for police and fire protection services. Additionally, the Mayor's 2006-2007 Budget includes an eight percent funding increase for policing services in San Francisco, including the hiring of up to 98 additional police officers and support staff.⁴² Given staffing and funding increases in city-wide personnel, the Southern Station would be able to provide the necessary police services and crime prevention in the area. Meeting this additional service demand would not require the construction of new police facilities. Hence, the proposed project would have a less-than-significant impact on police services, and will not be discussed in the EIR.

Schools

Some residents of the 156 proposed dwelling units may be families with school age children. The 156 residential units would include approximately 54 studios, 83 one-bedroom units, and 19 two-bedroom

⁴² Gavin Newsom, City and County of San Francisco. *Mayor's Proposed Budget 2006-2007*.

units. The 102 one- and two-bedroom units would generate approximately 21 students.⁴³ This number of students may be increased somewhat by designation of 23 of the project's dwelling units as below market rate (BMR), for which the qualification criteria preferentially favor families. The 1,789 units identified under Topic 3 above, Population and Housing, page 42, would generate approximately 364 students. It is anticipated that the existing schools could accommodate these students. Nearby private schools include the Chinese American International School at 150 Oak Street and the International Christian School at 22 Waller Street, both approximately five blocks from the site. Bessie Smith Childcare Center is located at 95 Gough Street, approximately 1 mile from the project site. The nearest public elementary schools, approximately equidistant at about six blocks from the project site, are the Bessie Carmichael Elementary School (499 students) and Child Development Center at 375 Seventh Street, the Tenderloin Elementary School (359 students) at 627 Turk Street, and the Marshall Elementary School (652 students) at 1575 Fifteenth Street. The nearest public middle school is Everett Middle School (526 students) at 450 Church Street, approximately 12 blocks from the site, and the nearest public high school is Mission High School (864 students) at 3750 Eighteenth Street, approximately 12 blocks from the site.

The SFUSD is currently not a growth district, most facilities throughout the City are generally underutilized, and the SFUSD has more classrooms district-wide than it needs.⁴⁴ The proposed project and any other new development would be assessed \$2.24 per gross square foot of residential space under the District's development impact fee.⁴⁵ These funds could be used to rehabilitate underutilized schools to accommodate the students, if any, generated by the proposed project. Considering all of the above, the proposed project would not result in a significant unmet demand for school facilities. This topic will not be analyzed further in the EIR.

Cumulative Effects

Each public service provider must plan to accommodate growth within its service area under cumulative conditions. The proposed project would not exceed growth projections in the area, and as such, would be accommodated in the cumulative demand for services. This topic will not be discussed further in the EIR.

⁴³ The San Francisco Unified School District (SFUSD) uses a student generation rate of 0.203 students per new housing unit. See discussion in the Eastern Neighborhoods Rezoning and Community Plan Initial Study (Case No. 2004.0160E), Preliminary Draft 9-19-05 and the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Final EIS/EIR, March 2004; page 5-44; prepared for the U.S. Department of Transportation Federal Transit Administration, City and County of San Francisco, Peninsula Corridor of Joint Powers Board, and San Francisco Redevelopment Agency. A copy of this document is available for public review by appointment at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, California, as a part of Case File No. 2004.048E, and also online at www.transbayproject.org. Accessed for this report 30 August 2007.

⁴⁴ San Francisco Unified School District, Facilities Master Plan, 2003.

⁴⁵ Paul Cardoni, State Fund Manager, San Francisco Unified School District, personal communication, 30 August 30, 2007.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|--|---|-------------------------------------|-------------------------------------|
| 12. BIOLOGICAL RESOURCES— Would the project: | | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The project site is within a developed urban area and is completely covered by impervious surfaces. The project area does not include riparian habitat or other sensitive natural communities as defined by the California Department of Fish and Game and the United State Fish and Wildlife Service, therefore criteria 12b is not applicable to the project area. The project area does not contain any wetlands as defined by Section 404 of the Clean Water Act and the project area does not fall within any local, regional or state habitat conservation plans, therefore criteria 12c and 12f are not applicable to the proposed project. The project site does not provide habitat for any rare or endangered plant or animal species, and the proposed project would not affect or substantially diminish plant or animal habitats, including riparian or wetland

habitat. The project site does not provide vegetation capable of supporting avian species and the proposed project would not interfere with any resident or migratory species, or affect any rare, threatened, or endangered species. The proposed project would not interfere with species movement or migratory corridors. The proposed project would not conflict with any local policies or ordinances directed at protecting biological resources.

The San Francisco Board of Supervisors recently adopted legislation that amended the City's Urban Forestry Ordinance, *Public Works Code* Sections 801 et. seq., to require a permit from the DPW to remove any protected trees. Protected trees include landmark trees, significant trees, or street trees located on private or public property anywhere within the territorial limits of the City and County of San Francisco. No trees exist on or adjacent to the project site and therefore, none would be removed with the proposed project. DPW requires additional street trees be added as feasible along certain streets, and the project would include street trees along both the Mission and Tenth Street frontages. Based on the above, the proposed project would not result in significant adverse impacts on biological resources. This topic will not be addressed in the EIR.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|---|---|-------------------------------------|-------------------------------------|
| 13. GEOLOGY AND SOILS— | | | | | |
| Would the project: | | | | | |
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | | |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ii) Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| iv) Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|---|---|---|---|-------------------------------------|-------------------------------------|
| c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Change substantially the topography or any unique geologic or physical features of the site? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

The proposed project site is not in an area subject to landslide. Therefore, criterion 13a.iv is not applicable. The proposed project would connect to the City's sewer and stormwater collection and treatment system and would not use a septic waste disposal system. Therefore, criterion 13e is not applicable to the project site.

Based on its San Francisco location, it is likely that the site would experience periodic minor earthquakes and potentially a major (moment magnitude [Mw] greater than 7.1 characteristic) earthquake on one or more of the nearby faults during the life of the proposed development. The project site is located approximately 11 kilometers east of the San Andreas Fault, 17 kilometers east of the San Gregorio North Fault, and 18 kilometers west of the northern Hayward Fault. The Working Group for California Earthquake Probabilities estimates a 62 percent probability of an earthquake of Mw 6.7 or greater occurring on one of the major faults in the Bay Area by 2031.⁴⁶

The project site is not within an Earthquake Fault Zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act and no known fault or potentially active fault exists on the project site. In a seismically active area, such as the San Francisco Bay area, the possibility exists for future faulting in areas where no faults previously existed. The geotechnical investigation performed for the project site⁴⁷ found no evidence of

⁴⁶ Working Group for California Earthquake Probabilities, a group assembled by the U.S. Geological Survey, Earthquake Hazards Program. Its analysis is available online for review at <http://quake.usgs.gov/research/seismology/wg02/>.

⁴⁷ Treadwell & Rollo, Environmental and Geotechnical Consultants, *Geotechnical Investigation, 1415 Mission Street, San Francisco, California*, 27 March 2007. This report is on file at the Planning Department in Project File #2005.0540E, Fifth floor, 1650 Mission Street, San Francisco.

active faulting on the site and concludes that the risk of surface faulting is low. However, during an earthquake along any of the major faults mentioned above, the ground at the project site would experience strong to very strong shaking. Strong shaking during an earthquake can result in ground failure associated with soil liquefaction, lateral spreading, and differential compaction (also referred to as cyclic densification).

The Community Safety Element of the *General Plan* contains maps that indicate areas of the city where one or more geologic hazards exist. Maps 2 and 3 in the Community Safety Element of the *General Plan* show the intensity of ground shaking in San Francisco from two of the most probable earthquakes, one of magnitude 7.1 on the San Andreas Fault and one of magnitude 7.1 on the northern segment of the Hayward fault. The project site is in a Seismic Hazards Study Zone designated by the California Division of Mines and Geology as an area subject to "non-structural" damage from seismic groundshaking along both the Peninsula segment of the San Andreas Fault and the Northern segment of the Hayward fault. The project site is not in an area subject to landslide, seiche, or tsunami run-up, or reservoir hazards (Maps 5, 6, and 7 in the Community Safety Element).⁴⁸

The project site is at an elevation of approximately 35 feet above Mean Sea Level (MSL) and is essentially level. A one-story commercial building occupies the southern portion of the project site, and a paved parking area occupies the remainder of the property.

Based on the geotechnical report prepared for the project site, the parking lot at the project site is covered by two inches of asphaltic concrete over five inches of aggregate baserock.⁴⁹ The asphalt pavement is underlain by approximately 5.5 to 7.5 feet of very loose to medium dense sand fill. The fill is undocumented, and likely not engineered. The fill is underlain by medium dense to very dense Dune sand to depths of about 18 to 20 feet below ground surface (bgs). Below the Dune sand is a three to five foot thick layer of loose to very dense silty sand. Underlying this layer to the maximum depth explored (101 feet) is a layer of dense to very dense sand with varying amounts of silt and clay. The subsurface investigation included two borings drilled to depths of approximately 96 to 101 feet below the existing parking lot. Groundwater levels were not directly observed due to the type of drilling (rotary-wash) utilized; however, based on borings from adjacent sites groundwater levels are estimated at depths of 14.5 to 17.5 feet bgs. Exploratory borings on the project site in 2006 encountered groundwater at

⁴⁸ City and County of San Francisco, Community Safety Element, *San Francisco General Plan*, April 1997.

⁴⁹ Treadwell & Rollo, Environmental and Geotechnical Consultants, *Geotechnical Investigation*, 1415 Mission Street, San Francisco, California, 27 March 2007. This report is on file at the Planning Department in Project File #2005.0540E, Fifth floor, 1650 Mission Street, San Francisco, op cit.

approximately 20 feet below ground surface (bgs), and groundwater levels have been measured in nearby monitoring wells at depths ranging from 16 to 20 feet bgs.⁵⁰ For a discussion of groundwater resources, please refer to page 76.

The project site is located in an area delineated by the California Division of Mines and Geology as historically or potentially subject to liquefaction (Map 4 in the Community Safety Element). The geotechnical consultant encountered medium dense silty sand with varying clay content below the groundwater between depths of 18.5 to 35 feet bgs, and preliminarily concluded that there may be isolated zones where liquefaction may occur. The liquefaction zones appear to be discontinuous. The project site could be located on expansive soils. The geotechnical consultant estimated that there could be up to two inches of liquefaction-induced settlement in the ground surface during a major earthquake, if the sand liquefies. Because the anticipated excavation for the basement levels would remove these layers, liquefaction settlement should not affect the building; however, this settlement may affect adjacent sidewalks and streets.

Because the site is relatively flat and there is no historical evidence of lateral spreading at the site, the geotechnical consultant concluded that the potential for lateral spreading is low. Differential compaction (also referred to as cyclic densification) of non-saturated sand due to earthquake vibrations can cause ground surface settlement. The upper 16 feet of very loose to medium dense, non-saturated sand and silty sand encountered at the site is susceptible to cyclic densification because of its low to moderate relative density. The geotechnical consultant estimated that ground surface settlement due to cyclic densification during a major earthquake at the site in its present state could be on the order of several inches. The proposed excavation for the basement levels would replace this area of loose sand, and therefore, differential compaction should not affect the proposed building. However, similar to the liquefaction discussion above, the surrounding sidewalk and streets may be affected by potential settlement during an earthquake. This settlement would be in addition to the liquefaction settlement discussed above. The geotechnical report prepared for the project site did not identify any substantial risk due to expansive soil that would be created by the project.

The proposed project would not substantially change the topography of the site or any unique geologic or physical features of the site.

⁵⁰ Treadwell & Rollo, Phase I Environmental Site Assessment – 1415 Mission Street, San Francisco, California, 4 October 2006. This document is on file and available for public review by appointment at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, and is available for public review, by appointment, as part of the project file 2005.0540E.

For any development proposal in an area of liquefaction or expansion potential, DBI will require the project sponsor to prepare an updated geotechnical report pursuant to the State Seismic Hazards Mapping Act, in its review of the building permit application. The report would assess the nature and severity of the hazard(s) on the site and recommend project design and construction features that would reduce the hazard(s). The geotechnical analysis completed for the proposed project made recommendations for foundation design, dewatering, shoring and underpinning for adjacent buildings and improvements, and other geotechnical aspects of the proposed project. The geotechnical analysis found the site suitable for development provided that geotechnical recommendations were incorporated into the design and construction of the proposed project. The project sponsor has agreed to follow the recommendations of the current and any updated geotechnical report in constructing the proposed project.

To ensure compliance with all applicable Building Code provisions regarding structural safety, when reviewing the geotechnical report and building plans for a proposed project, DBI will ensure that the engineering and design features for the proposed project would reduce potential damage to structures from ground shaking and other seismic and geologic hazards. Potential damage to structures from geologic hazards would therefore be mitigated through the DBI review of the building permit application and implementation of the Building Code.

For all of the above reasons, the proposed project would not result in significant impacts related to geology, topography, or seismic or soil hazards, either individually or cumulatively. The EIR will not discuss these topics.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|---|---|--|---|-------------------------------------|---------------------------|
| 14. HYDROLOGY AND WATER QUALITY— Would the project: | | | | | |
| a) Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|--|---|-------------------------------------|-------------------------------------|
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion of siltation on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

As discussed in the section pertaining to geology and soils, above, the project site is not in an area subject to tsunami run-up, or reservoir inundation hazards (Maps 6, and 7 in the *General Plan Community Safety Element*). Therefore, criteria 14 g, h and j would not be applicable to the project site.

The City of San Francisco does not currently participate in the National Flood Insurance Program (NFIP) and no flood maps are published for the City. The Federal Emergency Management Agency (FEMA) is revising Flood Insurance Rate Maps (FIRMs), which support the NFIP, for San Francisco Bay Area communities. As part of this effort, FEMA plans to prepare a FIRM for the City and County of San Francisco for the first time. On September 21, 2007, FEMA issued a preliminary FIRM of San Francisco. The preliminary map is for review and comment only; FEMA anticipates that the final map will be

published in September 2008⁵¹. FEMA has tentatively identified special flood hazard areas (SFHAs)⁵² along the City's shoreline in and along the San Francisco Bay consisting of "A zones" (areas subject to inundation by tidal surge) and "V zones" (areas subject to the additional hazards that accompany wave action). According to the preliminary map, the project site is not within an A zone or a V zone⁵³. In addition, there are no natural waterways within or near the project site that could cause stream-related flooding. Therefore, no impacts related to placement of housing or other structures in a 100-year flood zone would occur, and this topic will not be analyzed in the EIR.

Water Quality

The proposed project would not substantially degrade water quality or contaminate a public water supply. Groundwater is not used as a drinking water supply in the City and County of San Francisco. The project site is completely covered with impervious surfaces and natural groundwater flow would continue under and around the site. Construction of the proposed project would not increase impervious surface coverage on the site nor reduce infiltration and groundwater recharge. Therefore, the proposed project would not substantially alter existing groundwater or surface flow conditions.

Because the proposed project would not change the amount of impervious surface area at the site, there also would be no increase in the quantity and rate of storm water runoff from the site that flows to the city's combined sewer system. Site drainage would be redesigned with the proposed project, but site runoff would continue to drain to the city's combined storm and sanitary sewer system. The foundation and portions of the building below grade would be water tight to avoid the need to permanently pump and discharge water. Because storm water flows from the proposed project could be accommodated by the existing combined sewer system, and because there would not be an expected increase in stormwater flows, the proposed project would not significantly impact surface or ground water quality.

Over the construction period, there would be a potential for erosion and transportation of soil particles during site preparation, excavation, foundation pouring, and construction of the building shell. Once in surface water runoff, sediment and other pollutants could leave the construction site and ultimately be released into the San Francisco Bay. Stormwater runoff from project construction would drain to the

⁵¹ City and County of San Francisco, Office of the City Administrator, National Flood Insurance Program Flood Sheet, http://www.sfgov.org/site/uploadedfiles/risk_management/factsheet.pdf, accessed November 12, 2007.

⁵² A special flood hazard area is the flood plain that is at risk from the 100-year flood (a flood having a one-percent chance of occurrence in a given year).

⁵³ Federal Emergency Management Agency, Preliminary Flood Insurance Rate Map, City and County of San Francisco, California, Panel 120, September 21, 2007, available on the Internet at http://www.sfgov.org/site/uploadedimages/risk_management/j120A_jpg.jpg, accessed December 14, 2007.

combined sewer and stormwater system and be treated at the Southeast Water Pollution Control Plant prior to discharge into San Francisco Bay. Pursuant to *Building Code* Chapter 33 (Excavation and Grading) and the City's NPDES permit, the project sponsor would be required to implement measures to reduce potential erosion impacts. During project operation, all wastewater from the proposed project building, and storm water runoff from the project site, would be treated at the Southeast Water Pollution Control Plant. Treatment would be provided pursuant to the effluent discharge standards contained in the City's National Pollutant Discharge Elimination System (NPDES) permit for the plant. During operations and construction, the proposed project would be required to comply with all local wastewater discharge and water quality requirements. Therefore, the proposed project would not substantially degrade water quality.

Groundwater Resources

Exploratory borings in 2006 encountered groundwater at approximately 20 feet below ground surface (bgs), and stabilized groundwater levels have been measured in nearby monitoring wells at depths ranging from 16 to 20 feet bgs.

Due to the anticipated depth of excavation of approximately 37.5 feet for the four-level parking garage, and soils disturbance to a depth of approximately 45.5 feet below grade for a concrete mat foundation, dewatering would likely be necessary during excavation. The Bureau of System Planning, Environment and Compliance of the Public Utilities Commission must be notified of projects requiring dewatering, and may require groundwater analysis before discharge into the local wastewater system. Any groundwater discharged during construction of the proposed project would be subject to requirements of the City's Industrial Waste Ordinance (Ordinance Number 199-77) that groundwater meet specified water quality standards before it may be discharged into the sewer system.

Should dewatering be necessary, the final soils report would need to address the potential settlement and subsidence impacts of this dewatering. Based on this discussion, the soils report would determine whether or not a lateral movement and settlement survey should be conducted to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey were recommended, DPW would require that a Special Inspector (as defined in Article 3 of the Building Code) be retained by the project sponsor to perform this monitoring. Groundwater observation wells would be installed to monitor potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable movement were to occur during construction, groundwater recharge would be used to halt this settlement. The project sponsor would delay construction if necessary. Costs for the survey and any necessary repairs to service lines under the street would be borne by the project sponsor. If dewatering

were necessary, the project sponsor and its contractor would follow the geotechnical engineers' recommendations regarding dewatering to avoid settlement of adjacent streets, utilities, and buildings that could potentially occur as a result of dewatering.

Based on the information presented above, the proposed project would not have significant water quality, groundwater, or erosion impacts. Therefore, these topics will not be discussed further in the EIR.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|---|---|-------------------------------------|-------------------------------------|
| 15. HAZARDS AND HAZARDOUS MATERIALS – Would the project: | | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury or death involving fires? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

The project site is not located within an airport land use plan area, or in the vicinity of a private airstrip. Therefore, significance criteria 15 e and f would not apply to the project site. The City has adopted an ordinance (Ordinance 253-86, signed by the Mayor on June 27, 1986), which requires analyzing soil for hazardous wastes within specified areas, known as the Maher area, when over 50 cubic yards of soil is to be disturbed and on sites specifically designated by the Director of Public Works.⁵⁴ The project site falls outside the boundary of the Maher Ordinance and, therefore, would not be subject to this ordinance.

A Phase I and Phase II Environmental Site Assessment (ESA) were prepared for the project site.^{55,56} A Phase I ESA assesses possible environmental concerns related to on-site or nearby chemical use, storage, handling, spillage, or disposal, with particular focus on potential degradation of soil or groundwater quality. The Phase I ESA also reviews the land use history of the project site and operating practices at or near the site to assess potential hazards from reported chemical releases on nearby properties and the potential migration of chemicals, contaminants, and toxics onto the project site. A Phase II ESA generally involves subsurface testing of soil and/or groundwater to define the presence, absence, or extent of hazardous materials impacts in areas of known or suspected contamination. The results of the Phase I and Phase II ESAs for the project site are described under the heading Project Site, below.

Surrounding Area

Surrounding property historically has been used for commercial and light industrial purposes. From the 1940s to the 1970s there were several automotive repair facilities and gasoline stations within a two-block radius of the site. At the present time, adjacent property uses include retail, mixed-use, the California Institute of Integral Studies, public storage, parking lots, and a restaurant. During the site reconnaissance, no apparent signs of chemical releases or spills were noted at any nearby properties, although as described below several offsite areas have been identified that have impacted soil and groundwater in the vicinity.

Project Site

Based on historic aerial photographs (dating from 1931) and historic *Sanborn Fire Insurance Maps* (dating from 1889), it appears that the project site was vacant until approximately 1949. According to available

⁵⁴ The Maher Ordinance applies to that portion of the City bayward of the original high tide line, where past industrial uses and fill associated with the 1906 earthquake and bay reclamation often left hazardous waste residue in soils and groundwater. The ordinance requires that soils must be analyzed for hazardous wastes if more than 50 cubic yards of soil are to be disturbed.

⁵⁵ Treadwell & Rollo, *Phase I Environmental Site Assessment*, 1415 Mission Street, San Francisco, California, 4 October 2006.

⁵⁶ Treadwell & Rollo, *Phase II Environmental Site Assessment*, 1415 Mission Street, San Francisco, California, 11 April 2007.

records, it was then occupied by a service station from 1949 until 1972, when the property is no longer listed as a "gas and oil" facility on the Sanborn maps. Sanborn maps from 1974 and aerial photographs from 1977 show the site as it is currently, with a single-story building on the southern side and the remainder of the site occupied by a parking lot.

The project site is not listed on the California Department of Toxic Substances Control Hazardous Waste and Substances Sites List or in database reports from state and federal regulatory agencies that identify businesses and properties that handle or have released hazardous materials or waste.

The Phase I ESA identified four recognized environmental conditions at the project site: the potential presence of underground storage tanks (USTs); the presence of hydraulic hoists; potential contaminants associated with historic fill soils; and petroleum hydrocarbon contamination from one or more off-site sources. As noted in project geotechnical study, a strong hydrocarbon odor was detected in samples taken from a boring at the project site.⁵⁷ The Phase I and Phase II ESAs identify the most likely offsite source of contamination as the former fuel station operations at 1400 Mission Street. This site is approximately 78 feet northeast and up- to cross-gradient from the project site, and is listed in a number of regulatory agency databases based on historic releases from gasoline and BTEX⁵⁸ compounds.

The Phase II ESA was prepared⁵⁹ to address issues identified by the Phase I ESA, and assesses the likely source of any identified contamination at the site. The Phase II report makes recommendations regarding additional investigation and/or remediation work that may be required at the project site. Work conducted for the Phase II ESA included collecting soil samples of the fill material and underlying native soil from six exploratory borings, chemical testing of selected samples, and evaluation of the results. The Phase II ESA concludes that contaminants of concern in shallow soils do not exceed the Regional Water Quality Control Board's (RWQCB's) Environmental Screening Levels (ESLs) for residential soils; however in soils between 19 and 25 feet below ground level, some contaminants, including lead, TPH (Total petroleum hydrocarbons), and TRPH (Total recoverable petroleum hydrocarbons), exceed the ESLs. The Phase II ESA recommends geophysical investigation of whether any historic USTs remain onsite; soil sampling under the hydraulic hoists; and preparation of a soil management plan (SMP) and a health and

⁵⁷ Treadwell & Rollo, Environmental and Geotechnical Consultants, *Geotechnical Investigation, 1415 Mission Street, San Francisco, California*, 27 March 2007. This report is on file at the Planning Department in Project File #2005.0540E, Fifth floor, 1650 Mission Street, San Francisco.

⁵⁸ BTEX is an acronym that stands for Benzene, Toluene, Ethylbenzene, and Xylenes.

⁵⁹ Treadwell & Rollo, *Phase II Environmental Site Assessment, 1415 Mission Street, San Francisco, California*, 11 April 2007.

safety plan. The San Francisco Department of Public Health additionally recommends⁶⁰ that the geophysical investigation include surrounding sidewalk areas, filing permits prior to removing the hoists, and including dust suppression in the SMP.

Based on the information discussed above, the Phase I ESA found that previous investigations had identified soil and groundwater contamination as originating from an off-site source. It suggested that further investigation was warranted to rule out potential on-site sources, including hydraulic hoists and earthquake fill material, which may contain elevated levels of petroleum hydrocarbons and heavy metals, as is typical for the area. The Phase II investigation concluded that the hydraulic hoists did not likely contribute to impacted soil and groundwater, and recommended further investigation of other potential sources. Implementation of **Mitigation Measure 3, page 92**, and **Mitigation Measure 4, page 92**, would reduce the impact of the identified conditions, including the presence of impacted soil and groundwater at the project site, to a less-than-significant level. The recommendations of the Department of Public Health regarding geophysical investigation of surrounding sidewalk areas and including dust suppression in the SMP are incorporated into Mitigation Measures 3 and 4, respectively. Prior to removal of the hydraulic hoists on the project site, existing regulations require the project sponsor to obtain permits from the Hazardous Materials Unified Program Agency (HMUPA) and the San Francisco Fire Department.

Proposed Use

Operating the new building would involve handling a range of common types of hazardous materials, such as paints, cleaners, toners, solvents, and disinfectants. These commercial products are labeled to inform users of potential risks and to instruct them in appropriate storage, handling, and disposal procedures. Businesses are required by law to ensure employee safety by identifying hazardous materials, and adequately training workers. For these reasons, hazardous materials use for operating the proposed residential and retail building would not pose a substantial public health or safety hazard to the surrounding area.

⁶⁰ City and County of San Francisco Department of Public Health, Division of Occupational and Environmental Health, letter to Steven Kay, R&K Investments, May 9, 2007. This document is on file and available for public review by appointment at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, and is available for public review, by appointment, as part of the project file 2005.0540E.

Hazardous Building Materials

Asbestos

Due to the age of the existing commercial building on the site, it may contain asbestos-containing building materials (ACBM). Section 19827.5 of the California Health and Safety Code, adopted January 1, 1991, requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. The BAAQMD is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified ten days in advance of any proposed demolition or asbestos abatement work. The notification must include the names and addresses of the operations and the names and addresses of persons responsible; location and description of the structure to be demolished/altered, including size, age, and prior use, and the approximate amount of friable (easily crumbled) asbestos; scheduled starting and completion dates of demolition or asbestos abatement work; nature of the planned work and methods to be employed; procedures to be employed to meet BAAQMD requirements; and the name and location of the waste disposal site to be used. The BAAQMD randomly inspects asbestos removal operations. In addition, the BAAQMD will inspect any removal operation about which a complaint has been received. Any ACBM disturbance at the project site would be subject to the requirements of BAAQMD Regulation 11, Rule 2: Hazardous Materials; Asbestos Demolition, Renovation and Manufacturing.

The local office of the State Occupational Safety and Health Administration must also be notified of asbestos abatement to be carried out. Asbestos abatement contractors must follow State regulations contained in 8 CCR 1529 and 8 CCR 341.6 through 341.14 where there is asbestos-related work involving 100 square feet or more of asbestos containing material. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California. The owner of the property where abatement is to occur must have a Hazardous Waste Generator Number assigned by and registered with the Office of the California Department of Health Services in Sacramento. The contractor and hauler of the material are required to file a Hazardous Waste Manifest that details the hauling of the material from the site and the disposal of it. Pursuant to California Law, DBI would not issue the required permit until the applicant has complied with the notice requirements described above.

These regulations and procedures established as part of the permit review process would ensure that any potential impacts due to asbestos would be reduced to a less-than-significant level.

Lead-Based Paint

Lead paint may be found in the existing building, constructed before 1974 and proposed for demolition as part of the proposed project. Demolition must be conducted in compliance with Chapter 34, Section 3407 of the *San Francisco Building Code (Building Code)*, Work Practices for Lead-Based Paint on Pre-1979 Buildings and Steel Structures. Where there is any work that may disturb or remove lead paint on the exterior of any building, or the interior of occupied buildings built prior to or on December 31, 1978, and exterior work would disturb more than 100 sq.ft. or 100 linear feet of lead-based paint, Section 3407 requires specific notification and work standards, and identifies prohibited work methods and penalties.

Chapter 34, Section 3407 contains performance standards, including establishment of containment barriers, at least as effective at protecting human health and the environment as those in the Department of Housing and Urban Development (HUD) Guidelines (the most recent Guidelines for Evaluation and Control of Lead-Based Paint Hazards) and identifies prohibited practices that may not be used in disturbance or removal of lead-based paint. Any person performing work subject to the ordinance shall make all reasonable efforts to prevent migration of work debris beyond containment barriers during the course of the work, and any person performing regulated work shall make all reasonable efforts to remove all visible lead paint contaminants from all regulated areas of the property prior to completion of the work.

The Ordinance also includes notification requirements, contents of notice, and requirements for project site signs. Notification includes notifying bidders for the work of any paint inspection reports verifying the presence or absence of lead-based paint in the regulated area of the proposed project. Prior to commencement of work, the responsible party must provide the Director of the DBI with written notice that describes the address and location of the proposed project; the scope and specific location of the painted surface being disturbed and/or removed; anticipated job start and completion dates for the work; whether the responsible party has reason to know or presume that lead-based paint is present; whether the building is residential or nonresidential; whether it is owner-occupied or rental property; the approximate number of dwelling units, if any; the dates by which the responsible party has or will fulfill any tenant or adjacent property notification requirements; and the name, address, telephone number, and pager number of the party who will perform the work. (Further notice requirements include: a Post Sign notifying the public of restricted access to work area, a Notice to Residential Occupants, Availability of Pamphlet related to protection from lead in the home, and Early Commencement of Work [by Owner, Requested by Tenant], and Notice of Lead Contaminated Dust or Soil, if applicable.) The ordinance contains provisions regarding inspection and sampling for compliance by DBI, and enforcement, and describes penalties for non-compliance with the requirements of the ordinance.

These regulations and procedures, already established as part of the building permit review process, would ensure that potential impacts of the proposed project due to the presence of lead-based paint would be reduced to a less-than-significant level.

Other Potential Hazardous Building Materials

In addition to ACBM and lead-based paint, the existing building on the site may contain other potentially hazardous building materials such as polychlorinated biphenyl (PCBs), contained primarily in exterior paint, sealants, electrical equipment, and fluorescent light fixtures. Fluorescent light bulbs are also regulated (for their disposal) due to their mercury content. The building contains seven hydraulic lifts which likely contain hydraulic oils. Inadvertent release of such materials during demolition could expose construction workers, occupants, or visitors to these substances and could result in various adverse health effects if exposure were of sufficient quantity. Although abatement or notification programs described above for asbestos and lead-based paint have not been adopted for PCBs, mercury, other lead-containing materials, or other possible hazardous materials, items containing these substances that are intended for disposal must be managed as hazardous waste and handled in accordance with Occupational Safety and Health Administration (OSHA) worker protection requirements. Potential impacts associated with encountering hazardous building materials such as PCBs, mercury, and lead would be considered a potentially significant impact. Hazardous building materials sampling and abatement pursuant to existing regulations prior to renovation work, as described in **Mitigation Measure 5, page 94**, would reduce potential impacts associated with PCBs, mercury, lead, and other toxic building substances in structures to a less-than-significant level. With implementation of **Mitigation Measure 5**, the proposed demolition and construction of the proposed project would not pose a direct (through material removal, if required) or indirect (through transport of materials or accidental release) public health hazard to the surrounding neighborhood.

Emergency Response Plans

The proposed project, as an infill development, would not interfere with existing emergency response or excavation plans. Occupants of the proposed building would contribute to congestion if an emergency evacuation of the South of Market area were required. Section 12.202(e)(1) of the San Francisco Fire Code requires that all owners of high-rise buildings (over 75 feet) "shall establish or cause to be established procedures to be followed in case of fire or other emergencies. All such procedures shall be reviewed and approved by the chief of division." Additionally, project construction would have to conform to the provisions of the Building and Fire Codes which require additional life-safety protections for high-rise buildings.

Fire Hazards

San Francisco ensures fire safety primarily through provisions of the *Building* and *Fire Codes*. As noted above, for all projects over 75 feet, owners are required to establish procedures to be followed in the case of fire or other emergencies, and these procedures are required to be reviewed and approved by the chief of division. The final building plans for any new residential project greater than two units are also reviewed by the Department of Building Inspection(as well as the San Francisco Fire Department), in order to ensure conformance with these provisions. Therefore, potential fire hazards (including those associated with hillside development, hydrant water pressure, and emergency access) would be mitigated during the permit review process.

Conclusion

Potential public health and safety hazards related to the possible presence of hazardous materials on the project site, to the routine use of hazardous materials, and to potential fire hazards in the new building would be reduced to a less-than-significant level as a result of regulations and procedures already established as part of the building permit review process, **Mitigation Measure 3, Page 92, Mitigation Measure 4, Page 92, and Mitigation Measure 5, Page 94**. The EIR will not include a discussion of hazardous materials.

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact | Not Applicable |
|---|--------------------------------------|---|-------------------------------------|--------------------------|-------------------------------------|
| | | | | | |
| 16. MINERAL AND ENERGY RESOURCES – Would the project: | | | | | |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

No mineral resources are located on or near the project site; therefore mineral resources will not be affected by the proposed project, and criteria 16a and 16b are not applicable to the proposed project.⁶¹ New buildings in San Francisco are required to conform to current state and local energy conservation standards, including Title 24 of the California Code of Regulations. DBI enforces Title 24 compliance and documentation demonstrating compliance with these standards is submitted with the application for the building permit. The proposed project would, therefore, not cause a wasteful use of energy. The proposed project would not use substantial quantities of other non-renewable natural resources, or use fuel or water in an atypical or wasteful manner.

San Francisco consumers have experienced rising energy costs and uncertainties regarding the supply of electricity. The root causes of these conditions are under investigation and are the subject of much debate. Part of the problem may be that the State does not generate sufficient energy to meet its demand and must import energy from outside sources. Another part of the problem may be the lack of cost controls as a result of deregulation. The California Energy Commission (CEC) is currently considering applications for the development of new power-generating facilities in San Francisco, the Bay Area, and elsewhere in the State. These facilities could supply additional energy to the power supply "grid" within the next few years. These efforts, together with conservation, would be part of the statewide effort to achieve energy sufficiency. The project-generated demand for electricity would be negligible in the context of overall demand within San Francisco and the State, and would not in and of itself require a major expansion of power facilities. Therefore, the energy demand associated with the proposed project would not result in a significant physical environmental effect or contribute to a cumulative impact.

The proposed project would therefore not have a significant project-specific or cumulative effect on mineral or energy resources, and these topics will not be discussed in the EIR.

⁶¹ Environmental Protection Element, San Francisco General Plan, amended 2 December 2004.

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|---|---|--------------------------|-------------------------------------|
| 17. AGRICULTURE RESOURCES — <i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.</i> Would the project: | | | | | |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland of Statewide Importance, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The project site is developed and is located in the City and County of San Francisco, an urban area, and therefore not agricultural in nature. The California Department of Conservation's Farmland Mapping and Monitoring Program does not identify any land in the County as agricultural in nature. Because the project site does not contain agricultural uses and it is not zoned for such uses, the proposed project would not convert any prime farmland, unique farmland or Farmland of Statewide Importance to non-agricultural use, and would not conflict with any existing agricultural zoning or Williamson Act contracts.⁶² Accordingly, this topic is not applicable to the project site.

⁶² San Francisco is identified as "Urban and Built Up Land" on the California Department of Conservation *Important Farmland of California Map*, 2002. This map is available for viewing on-line at the Department of Conservation website (www.consrv.ca.gov).

| <i>Topics:</i> | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> | <i>Not Applicable</i> |
|--|---|--|---|--------------------------|---------------------------|
| 18. MANDATORY FINDINGS OF SIGNIFICANCE—Would the project: | | | | | |
| a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Have impacts that would be individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Mitigation Measures 1 – 5, contained in Section F. below have been incorporated into the proposed project to address potential construction-related impacts to archeological resources air quality, possible underground storage tanks, soil contamination, and hazardous building materials. Implementation of these measures would reduce these potential impacts of the proposed project to a less than significant level. The proposed project could have a significant effect on wind and shadow due to its height and configuration; would increase traffic, transit, and parking demand in the area; and could have significant cumulative traffic noise impact. The potential transportation and traffic, noise, wind, and shadow impacts will be analyzed in the EIR.

Cumulative analysis depends on a prediction of possible future environmental changes well beyond construction of the proposed project. Potential project contributions to cumulative traffic at intersections in the vicinity will be analyzed in the EIR. The proposed project could contribute to a cumulatively considerable land use and aesthetic impact, and these topics will be analyzed in the EIR. The proposed project would not be considered to contribute incrementally to cumulative regional air quality conditions, cumulative population and housing impacts, cumulative recreation impacts, cumulative water service

impacts, cumulative solid waste impacts, cumulative school impacts, cumulative geology and soils impacts, or cumulative energy impacts.

Neighborhood Notice

Notification of a Project Receiving Environmental Review was sent out to the occupants of properties adjacent to the project site, owners within 300 feet, and to other interested parties in the neighborhood on May 19, 2006. Groups and individuals commented and expressed concern regarding potential effects of the proposed project including (section where analysis is contained immediately follows) height, context and scale of proposed project, neighborhood character, and residential density (Topic 1); transit, traffic, and bicycle facilities (Topic 5); wind and blockage of air and light (Topic 8); and effect on parks and open space (Topic 9).

F. MITIGATION MEASURES

The project sponsor has agreed to implement the following mitigation measures identified in this Initial Study, that are necessary to reduce potential construction-related archeological, air quality, soil contamination, and hazardous building material impacts to a less-than-significant level. These mitigation measures, as well as any additional mitigation measures included within the EIR, will also be contained in the EIR.

Mitigation Measure 1

Archeological Resources

Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the Environmental Review Officer (ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the proposed project for up to a maximum of four weeks. At

the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce impacts to a less-than-significant level of potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that could potentially be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

- A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition,

foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;

- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with the project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the

proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program.* Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report.* Description of proposed report format and distribution of results.
- *Curation.* Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification to the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Mitigation Measure 2

Construction Air Quality

Consistent with the BAAQMD's dust control measures, the project sponsor shall require the construction contractor(s) to spray unpaved construction areas of the project site with non-potable water during demolition, excavation, grading, and site preparation activities at least twice per day; to cover stockpiles of soil, sand and other such material on-site and during hauling; and sweep surrounding streets during these periods at least once per day to reduce particulate emissions. Ordinance No. 175-91, passed by the Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities. The project sponsor shall require the construction contractor(s) to obtain reclaimed water from the Clean Water Program for this purpose.

The project sponsor shall require the project contractor(s) to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as prohibiting idling motors when equipment is not in use or when trucks are waiting in queues, and implementing specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period.

Mitigation Measure 3

Hazards (Underground Storage Tanks)

The project sponsor has conducted a geophysical survey of the project site, which detected an underground object that could potentially be a UST. If it is determined during construction that a UST is in fact present, construction work shall be stopped and permits from the Hazardous Material Unified Program Agency (HMUPA), Fire Department, and, if required, DPW (Streets and Sidewalk) shall be obtained for the UST (and related piping) removal. HMUPA, SFFD (and possibly DPW) will make inspections prior to removal, and only upon approval of the inspector may the UST be removed from the ground. Appropriate soil and, if necessary, groundwater samples shall be taken at the direction of the HMUPA inspector and analyzed. Appropriate transportation and disposal of the UST shall be arranged. If analytical results indicate non-detectable or low levels of contamination, HMUPA will issue a "Certificate of Completion." If the HMUPA inspector requires that an Unauthorized Release (leak) Report is required due to holes in the UST or odor or visual contamination, or if analytical results indicate there are elevated levels of contamination, the case will be referred to the Local Oversight Program for further action.

Mitigation Measure 4

Hazards (Disposal of Contaminated Soil, Site Health and Safety Plan)

If, based on the results of the soil tests conducted, the San Francisco Department of Public Health (DPH) determines that the soils on the project site are contaminated with contaminants at or above potentially hazardous levels, all contaminated soils designated as hazardous waste shall be excavated by a qualified Removal Contractor and disposed of at a regulated Class I, II, or III hazardous waste landfill in accordance with state and federal regulations, as stipulated in the Site Mitigation Plan. The Removal Contractor shall, as required, obtain, complete, and sign hazardous waste manifests to accompany the soils to the disposal site. Other excavated soils shall be disposed of in an appropriate landfill, as governed by applicable laws and regulations, or other appropriate actions shall be taken in coordination with the San Francisco Department of Public Health (DPH).

If the San Francisco Department of Public Health (DPH) determines that the soils on the project site are contaminated with contaminants at or above potentially hazardous levels, a Site Health and Safety (H&S) Plan would be required by the California Division of OSHA prior to initiating any earth-moving activities at the site. The Site Health and Safety Plan shall identify protocols for managing soils during construction

to minimize worker and public exposure to contaminated soils. The protocols shall include at a minimum:

- Sweeping of adjacent public streets daily (with water sweepers) if any visible soil material is carried onto the streets.
- Characterization of excavated native soils proposed for use on site prior to placement to confirm that the soil meets appropriate standards.
- The dust controls specified in Air Quality Mitigation Measure 2.
- Protocols for managing stockpiled and excavated soils.

The Site Health and Safety Plan shall identify site access controls to be implemented from the time of ground disturbance through the completion of earthwork construction. The protocols shall include at a minimum:

- Appropriate site security to prevent unauthorized pedestrian/vehicular entry, such as fencing or other barrier of sufficient height and structural integrity to prevent entry and based upon the degree of control required.
- Posting of "no trespassing" signs.
- Providing on-site meetings with construction workers to inform them about security measures and reporting/contingency procedures.

If groundwater contamination is identified, the Site Health and Safety Plan shall identify protocols for managing groundwater during construction to minimize worker and public exposure to contaminated groundwater. The protocols shall include procedures to prevent unacceptable migration of contamination from defined plumes during dewatering.

The Site Health and Safety Plan shall include a requirement that construction personnel be trained to recognize potential hazards associated with underground features that could contain hazardous substances, previously unidentified contamination, or buried hazardous debris. Excavation personnel shall also be required to wash hands and face before eating, smoking, and drinking.

The Site Health and Safety Plan shall include procedures for implementing a contingency plan, including appropriate notification and control procedures, in the event unanticipated subsurface hazards are discovered during construction. Control procedures could include, but would not be limited to, investigation and removal of underground storage tanks or other hazards.

Mitigation Measure 5

Hazardous Building Materials (PCBs, Mercury, Lead, and others)

The project sponsor shall ensure that pre-construction building surveys for PCB- and mercury-containing equipment, hydraulic oils, fluorescent lights, lead, mercury and other potentially toxic building materials are performed prior to the start of demolition. Any hazardous building materials so discovered shall be abated according to federal, state, and local laws and regulations.

G. ALTERNATIVES

Alternatives to the proposed project would be defined further and described in the EIR. At a minimum, the alternatives analyzed would include the following:

A *No Project Alternative* in which the project site would remain in its existing condition with the existing building.

A *Code-Conforming Alternative* in which the project would comply with existing limitations of the currently prevailing Heavy Commercial (C-M) zoning district and 130-L height and bulk district.

A *Reduced Scale Alternative*, in which the proposed project would be approximately eight stories and approximately 85 feet in height, with approximately 78 residential units, up to approximately 68 valet spaces in a two-level underground parking garage, and approximately 2,200 square feet of retail/personal services space on the ground floor.

A *Mitigated Alternative* in which the project would be modified to reduce wind impacts and other potentially significant impacts of the proposed project.

DETERMINATION

On the basis of this initial study:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☒ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

DATE

December 29, 2007

Paul Cooper, for

William C. Wycko
Acting Environmental Review Officer
for
Dean L. Macris
Director of Planning

PAGE INTENTIONALLY LEFT BLANK

Appendix B

Transportation Definitions

PAGE INTENTIONALLY LEFT BLANK

Roadway Classifications

The San Francisco Planning Department has developed a street hierarchy system for the City and County of San Francisco, in which the function and design of each street are consistent with the character and use of adjacent land. The major classifications in the Vehicle Circulation Plan of the San Francisco *General Plan* are:

- **Freeways:** Limited access, very high capacity facilities; primary function is to carry intercity traffic; they may, as a result of route location, also serve the secondary function of providing for travel between distant sections in the city.
- **Major Arterials:** Cross-town thoroughfares whose primary function is to link districts within the city and to distribute traffic from and to the freeways; these are routes generally of citywide significance; of varying capacity depending on the travel demand for the specific direction and adjacent land uses.
- **Transit Conflict Streets:** Street with a primary transit function, which are not classified as major arterials but experience significant conflicts with automobile traffic.
- **Secondary Arterials:** Primarily intra-district routes of varying capacity serving as collectors for the major thoroughfares; in some cases supplemental to the major arterial system.
- **Recreational Streets:** A special category of street whose major function is to provide for slow pleasure drives and cyclist and pedestrian use; more highly valued for recreational use than for traffic movement. The order of priority for these streets should be to accommodate: 1) pedestrians, hiking trails or wilderness routes, as appropriate; 2) cyclists; 3) equestrians; 4) automobile scenic driving. This should be slow and consistent with the topography and nature of the area.
- **Collector Streets:** Relatively low-capacity streets serving local distribution functions primarily in large, low-density areas, connecting to major and secondary arterials.
- **Local Streets:** All other streets intended for access to abutting residential and other land uses, rather than for through traffic: generally of lowest capacity.

In addition to the San Francisco Planning Department's roadway classifications, the freeways, major arterials, and transit conflict streets are included in the Congestion Management Program ("CMP") network and Metropolitan Transportation System ("MTS") network (see below).

Transit Preferential Streets

The Transit Preferential Street network classification system takes into consideration all transportation functions, and identifies the major transit routes where general traffic should be routed away from. There are two classifications of transit preferential streets: Primary Transit Streets, which are either transit-oriented or transit-important; and Secondary Transit Streets.

- **Primary Transit Street – Transit-Oriented:** Not major arterials, with either high transit ridership, high frequency of service, or surface rail. Along these streets, the emphasis should be on moving transit vehicles, and impacts on automobile traffic should be of secondary concern.
- **Primary Transit Street – Transit-Important:** Major arterials, with either high transit ridership, high frequency of service, or surface rail. Along these streets, the goal is to improve the balance between modes of transportation, and the emphasis should be on moving people and goods, rather than on moving vehicles.
- **Secondary Transit Street:** Medium transit ridership and low-to-medium frequency of service, or medium frequency of service and low-to-medium transit ridership, or connects two or more major destinations.

In general, it is City policy that transit preferential treatments should be concentrated on the most important transit streets, and the treatments applied should respond to all transportation needs of the street. For example, on streets that are major arterials for transit and not for automobile traffic, treatments should emphasize transit priority; on streets that are major arterials for both transit and automobiles, treatments should emphasize a balance between the modes. It is also City policy that automobile facility features (such as driveways and loading docks) should be reduced, relocated or prohibited on transit preferential streets in order to avoid traffic conflicts and automobile congestion.

Citywide Pedestrian Network

The Citywide Pedestrian Network is a classification of streets throughout the City used to identify streets devoted to or primarily oriented to pedestrian use. The main classifications are:

- **Citywide Pedestrian Network Street:** An inter-neighborhood connection with “citywide significance” includes both exclusive pedestrian and pedestrian-oriented vehicular streets. These streets include the Bay, Ridge and Coast trails, are used by commuters, tourists and the general public, and connect major institutions with transit facilities.
- **Neighborhood Network Street:** A neighborhood commercial, residential or transit street that serves pedestrians from the general vicinity. Some streets may be part of the Citywide network, but are generally oriented towards neighborhood-serving uses. Types include exclusive pedestrian and pedestrian-oriented vehicular streets. As part of the Neighborhood Network Street network, streets are classified as **Neighborhood Commercial Streets**, which are streets that are predominantly commercial use with parking and loading conflicts, or **Neighborhood Network Commercial Streets**, which are intra-neighborhood connection streets that connect neighborhood destinations.

In general, it is City policy that sufficient pedestrian movement space should be provided to minimize pedestrian congestion, sidewalks should be widened where intensive commercial, recreational or institutional activity is present, and efforts should be made to ensure convenient and safe pedestrian crossings at intersections.

Congestion Management Program Network

The CMP network is a network of freeways, state highways, major arterials and transit conflict streets (see Roadway Classifications, above) established in accordance with state Congestion Management legislation. As part of the CMP, the San Francisco County Transportation Authority is required to determine the level of service (“LOS”) for the CMP network streets every two years. The LOS is based on the average travel speed for each roadway segment during both the AM and PM peak periods. The level of service standard is LOS E, except for roadway segments that operated at LOS F in 1991 (when the first study was performed). The CMP requires development of “Deficiency Plans” for any CMP-designated roadway that operates at LOS F. These plans include an analysis of the causes of the deficiency, a list of improvements that would have to be made to prevent the deficiency from occurring (including cost estimates), a list of improvements proposed as part of the plan, and an action plan for implementation of the improvements (including an implementation schedule).

The following are the most-recently determined travel speeds and levels of service for the CMP network streets in the vicinity of the project area for the weekday PM peak period (generally 4:00 to 6:00 PM). For the other CMP network roadway segments in the vicinity of the project site, no travel speed or level of service information is provided.

| Roadway Performance - Weekday PM Peak Period | | | | |
|--|-----------|--------------|-----|---------------|
| Roadway Segment | Direction | Travel Speed | LOS | Year Reported |
| I-80 - US 101 to Fremont | E | 10.0 | F | 2004 |
| I-80 - Fremont to Treasure Island | E | 14.6 | F | 2004 |
| I-80 - Treasure Island to Fremont | W | 21.7 | F | 2004 |
| I-80 - Fremont to US 101 | W | 13.8 | F | 2004 |

Metropolitan Transportation System Network

The MTS network is defined by the Metropolitan Transportation Commission (“MTC”) as part of its Regional Transportation Plan. The MTS is a regional network of roadways, transit corridors and transfer points, identified by the MTC in the basis of specific criteria. The criteria identified facilities that provide relief to congested corridors, improve connectivity, accommodate travel demand and serve a regional transportation function. The State highways and major thoroughfares designated in San Francisco’s CMP roadway network are all included in the regional MTS network. There are few instances in which the local CMP network is not identical to the MTS network due to differences in the criteria used to define each network.

PAGE INTENTIONALLY LEFT BLANK

Appendix C

Wind

PAGE INTENTIONALLY LEFT BLANK

Donald Ballanti

Certified Consulting Meteorologist

1424 Scott Street
El Cerrito, Ca. 94530
(510) 234-6087
Fax: (510) 232-7752

September 8, 2008

Daniel Frattin
Reuben & Junius, LLP
235 Pine Street, Suite 1600
San Francisco, CA. 94104

Subject: 1415 Mission Street Project

Dear Mr. Frattin:

Enclosed are two copies of my revised wind tunnel report and a letter assessing the wind impacts of the current design changes. I incorporated your last set of comments into the report as I could, but you had two comments for which I made no changes. On page you asked if a change in windspeed from 50 mph to 51 represented a significant impact. I made no change since the actual speed in mph is not the threshold for significance in San Francisco, but the hours over the Hazard Criterion. As you know, the number of hours was predicted to increase, but the wind tunnel report explains that this type of result, based on 1 measurement point, can be misleading. The report makes reference to the large number of previous wind studies that show the cumulative effect on development is positive at the Market/10th Street intersection.

On page 9 you asked for a final paragraph making a conclusion on how changes to the design might affect winds at Market and 10th Streets. Since the report is addressing the wind tunnel results and not design changes, I made no change. I think this issue is more appropriately addressed in the attached letter, which is intended as re-evaluation of the wind impacts based on the actual design changes.

If you have any questions about this analysis, please call.

Sincerely,



Donald Ballanti
Certified Consulting Meteorologist

Donald Ballanti

Certified Consulting Meteorologist

1424 Scott Street
El Cerrito, Ca. 94530
(510) 234-6087
Fax: (510) 232-7752

September 8, 2008

Daniel Frattin
Reuben & Junius, LLP
235 Pine Street, Suite 1600
San Francisco, CA. 94104

Subject: 1415 Mission Street Project Redesign

Dear Mr. Frattin:

As you know, I conducted wind tunnel testing of the 1415 Mission Street project in March of 2007. It is my understanding that the project has been redesigned since the wind tunnel tests were conducted. The wind tunnel tests used a scale model built to plans designated Option 10, dated January 24, 2006. The current project plans, designated Option 11, are dated August 28, 2008.

The major difference between Option 10 and Option 11 is that Option 11 is two stories shorter. The project tested in the wind tunnel was a 16-story building of 205,764 gsf with a roof height of 150 feet. The current project is a 14-story building of 168,371 gsf with a roof height of 130 feet.

The two designs have similar floor plans but Option 11 is 20 feet shorter. In terms of potential for wind impacts, Option 11 would intercept a lesser volume of wind and should have wind impacts less than those described in my March 2007 wind tunnel report. The 20-foot reduction in building height can be expected to have no impact on the well-documented wind problems near the intersection of Market Street and 10th Street, which is located 1 block upwind of the 1415 Mission Street site.

Having reviewed current plans/elevations for the project as well as the wind tunnel studies that were completed for the project I am confident that the changes in the proposed design would not adversely affect ground level winds. The wind tunnel results from the earlier design can be assumed to be valid for the current design.

I hope that this analysis provides you with all the information you need. If you have any questions about this analysis, please call.

Sincerely,



Donald Ballanti
Certified Consulting Meteorologist

WIND TUNNEL ANALYSIS FOR THE PROPOSED
1415 MISSION STREET PROJECT, SAN FRANCISCO

Prepared for:

Reuben & Junius, LLP
235 Pine Street, Suite 1600
San Francisco, CA. 94104

March 2007

Donald Ballanti *Certified Consulting Meteorologist*

1424 Scott Street / El Cerrito, California 94530 / (510) 234-6087 / Fax: (510) 232-7752

I. INTRODUCTION

The project site is located on the southwest corner of Mission Street and Tenth Street. The site is currently occupied by a vacant one-story building. The proposed project would entail demolition of the existing building and new construction of a 16-story mixed use building. The new building would contain 156 dwelling units, 3,000 square feet of ground floor retail space, and four floors of underground parking for 156 vehicles. The proposed new building would be about 150 feet height.

The results of the following four test scenarios are reported here:

(1) Existing conditions. This included the recently completed Federal Building (located at 7th Street and Mission) and 1160 Mission Street projects.

(2) Existing conditions plus the proposed project.

(3) Existing conditions plus cumulative development plus project. Cumulative development consisted of the following projects in close proximity to the project site that are currently under construction, approved or under review with the City of San Francisco:

- 1177 Market Street project
- 1125 Market Street project
- Mercy residential project on Mission Street (between Nine and Tenth Streets)
- 77 Van Ness Avenue project
- 1 Polk project
- 55 Ninth Street project
- Fox Plaza project on Market Street
- 10th/Market Project
- 1355 Market Project Street project

(4) Existing plus cumulative (No project)

II. METHODOLOGY

Wind Tunnel Facilities

The scale model was tested in a Boundary Layer wind tunnel at the University of California, Davis, under the direction of Dr. Bruce White. Figure 1 is a diagram of the facility. These tests, however, were performed independent of the University.

Model and Boundary Layer

A 1 inch equals 50 feet scale model of the project site and surrounding several blocks was constructed in order to simulate the project and its existing context. Wind obstructions located further away from the project site were considered part of the general roughness of the site, and were modeled as part of the characteristic atmospheric boundary layer in the wind tunnel.

Simulation of the boundary layer in the natural wind is achieved by turbulence generators placed upwind of the test section. This allows for adjustment in the wind characteristics to provide for different model scales and varying terrain upwind of the project.

Measurement Protocols

The velocity measurements in this study were made with a hot wire anemometer. A total of 27 velocity measurement locations were selected for this study located along sidewalk areas adjacent to and near the project site for all runs.

In accordance with the San Francisco Wind Ordinance methodology for wind tunnel tests the model was tested for four wind directions: northwest, west-northwest, west and west-southwest.

Data Analysis

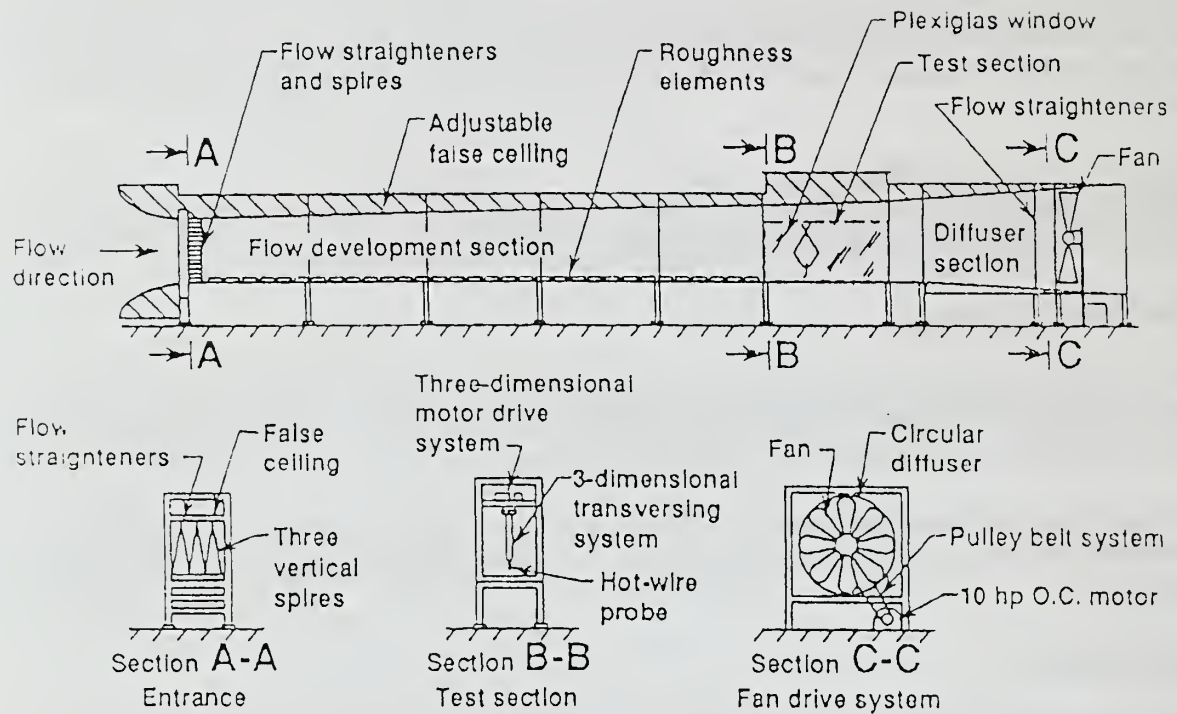
The San Francisco wind code is based on wind acceptability criteria defined in terms of "equivalent wind speed" (EWS). EWS denotes the mean hourly wind speed adjusted to account for the expected turbulence intensity or gustiness at the site. The wind speed limits in the code were developed with an inherent turbulence intensity of 15%. When the measured turbulence intensity at a point is greater than 15%, the equivalent wind speed is calculated by multiplying the mean velocity at the point by a weighting factor according to the following formula:

$$EWS = V_m (2 \cdot TI + 0.7) \text{ where:}$$

V_m = mean pedestrian-level wind speed

TI = turbulence intensity

Figure 1: UC Davis Boundary Layer Wind Tunnel



For measured turbulence intensities less than 15%, EWS is taken to be equal to V_m .

Each wind-tunnel measurement results in a ratio that relates the speed of ground-level wind to the speed at the reference elevation, in this case the height of the Old San Francisco Federal Building. The frequency with which a particular wind velocity is exceeded at any test location is then calculated by using the measured wind-tunnel ratio and a specified ground speed to determine the corresponding reference wind speed for each direction. In general, this gives different reference speeds for each major directional component of the wind. The wind data for San Francisco are then used to calculate the percentage of the time that the specific ground-level wind speed is exceeded for each directional component. The sum of these is the total percentage of time that the specified ground-level wind speed is exceeded. A computer is used to calculate the total percentages for a series of wind speeds until the speed exceeded ten percent of the time is found, for each location.

The mean wind speeds are compared to the comfort criterion of 11 mph for pedestrian areas, not to be exceeded more than 10 percent of the time. Separate calculations evaluate compliance with the hazard criterion. The wind data observed at the Old San Francisco Federal Building are not full hour average speeds as specified by the Code, so it is necessary to adjust the equivalent speeds to obtain the hourly average of 26 mph.¹ The frequency of short-term (3-minute averaged) wind observations at 36 mph is equivalent to the frequency of an hourly-averaged wind of 26 mph.

III. CRITERIA AND HISTORICAL WIND RECORDS

Wind conditions partly determine pedestrian comfort on sidewalks and in other public areas. In downtown areas, high-rise buildings can redirect wind flows around buildings and divert winds downward to street level; each can result in increased wind speed and turbulence at street level.

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to four MPH have no noticeable effect on pedestrian comfort. With winds from four to eight MPH, wind is felt on the face. Winds from eight to 13 MPH will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. For winds from 19 to 26 MPH, the force of the wind will be felt on the body. At 26 MPH to 34 MPH wind, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 MPH increase difficulty with balance and gusts can blow people over.²

The City of San Francisco Planning Code establishes wind criteria for C-3 Districts under Section 148 of the Planning Code. Section 148 of the Planning Code sets comfort levels of 7 MPH equivalent wind speed for public seating areas and 11 MPH equivalent wind speed for areas of substantial pedestrian use, each not to be exceeded more than 10% of the time from 7 am to 6 pm. In addition to the comfort criteria, San Francisco Planning Code establishes a wind hazard criterion. The hazard criterion is set at an hourly averaged wind speed of 26 MPH, which is not to be exceeded for a single hour of the year.

Predictions of wind speed are based upon historical wind records from the U.S. Weather Bureau weather station atop the old Federal Building at 50 United Nations Plaza during the years 1945-1950. This data base, comprised of 32,795 hourly observations, is of sufficient length to provide a reliable estimate of future climatic conditions in San Francisco.

Average wind speeds in San Francisco are greatest in the summer and least in the fall. Winds also exhibit a diurnal variation with the strongest winds occurring in the afternoon, and lightest winds occurring in the early morning. Table 1 shows the seasonal variation of wind direction, average wind speeds and frequency of calms for winds in San Francisco.

Winds in San Francisco are most frequently from the west to northwest directions, reflecting the persistence of sea breezes. Wind direction is most variable in the winter. The approach of winter storms often results in southerly winds. Although not as frequent as westerly winds, these southerly winds are often strong. The strongest winds in San Francisco are typically from the south during the approach of a winter storm.

Table 1: Seasonal Wind Direction Frequency In Percent and Average Speed in Knots³

| Direction | January | | April | | July | | October | | Annual | |
|-----------|---------|-------|-------|-------|-------|-------|---------|-------|--------|-------|
| | Freq. | Speed | Freq. | Speed | Freq. | Speed | Freq. | Speed | Freq. | Speed |
| N | 12.5 | 7.9 | 2.2 | 11.0 | 0.3 | 6.0 | 3.3 | 6.6 | 5.0 | 7.2 |
| NNE | 1.3 | 5.6 | 0.7 | 6.1 | 0.3 | 6.8 | 0.7 | 6.6 | 0.8 | 6.0 |
| NE | 4.5 | 5.3 | 1.3 | 4.7 | 1.1 | 7.4 | 2.2 | 5.8 | 1.9 | 5.6 |
| ENE | 1.4 | 6.3 | 0.6 | 4.8 | 0.2 | 5.1 | 0.8 | 5.1 | 0.8 | 5.6 |
| E | 11.9 | 4.8 | 2.6 | 4.5 | 0.1 | 3.9 | 4.8 | 4.5 | 4.8 | 5.0 |
| ESE | 2.1 | 6.4 | 0.3 | 5.2 | 0.1 | 2.5 | 0.6 | 5.8 | 0.8 | 5.8 |
| SE | 9.1 | 6.4 | 2.4 | 7.8 | 0.2 | 5.0 | 3.7 | 6.6 | 4.2 | 6.8 |
| SSE | 2.8 | 5.6 | 0.3 | 3.8 | 0.1 | 3.0 | 1.3 | 9.0 | 1.2 | 6.4 |
| S | 6.7 | 5.0 | 4.2 | 7.1 | 1.1 | 4.9 | 4.5 | 7.5 | 4.1 | 6.4 |
| SSW | 1.0 | 4.8 | 0.4 | 4.1 | 0.1 | 3.0 | 1.7 | 12.8 | 0.9 | 8.6 |
| SW | 4.5 | 8.0 | 7.7 | 9.2 | 15.6 | 10.1 | 7.8 | 9.1 | 9.3 | 9.3 |
| WSW | 1.0 | 5.9 | 1.7 | 7.7 | 1.2 | 8.1 | 2.8 | 8.8 | 2.4 | 8.6 |
| W | 13.2 | 7.2 | 43.0 | 10.9 | 53.0 | 13.1 | 34.6 | 9.1 | 35.7 | 10.9 |
| WNW | 7.5 | 11.1 | 20.7 | 14.1 | 14.9 | 14.5 | 15.2 | 10.9 | 13.8 | 12.7 |
| NW | 11.5 | 7.7 | 9.3 | 10.7 | 10.7 | 11.4 | 10.8 | 8.5 | 10.0 | 9.7 |
| NNW | 1.2 | 5.7 | 0.6 | 10.8 | 0.6 | 8.5 | 0.5 | 7.5 | 0.7 | 8.3 |
| Calm | 7.7 | --- | 2.1 | --- | 0.3 | --- | 4.6 | --- | 3.7 | --- |

IV. RESULTS

The comfort criterion results are shown in Table 2. For each measurement point the measured equivalent wind speed is compared to the appropriate comfort criterion. Where the predicted wind exceeds the comfort criterion, the percent of time that the wind speed exceeds the criterion is shown.

The hazard criterion results are shown in Table 3. The predicted wind to be exceeded 1 hour per year is shown. At locations where winds are predicted to exceed the hazard criterion the hours per year that the criterion would be exceeded are shown.

The location of measurement points is shown in Figure 2.

Comfort Criterion

The existing conditions in the proposed project vicinity are moderately windy; the average wind speed for the 27 test point locations is approximately 11.3 mph. The highest wind speed in the vicinity (20 mph) occurs near the southwest corner of Market Street and 10th Street. Fifteen of the 27 locations currently meet the Planning Code's pedestrian-comfort criterion value of 11 mph.

Twelve of the 27 sidewalk test points exceed the Planning Code's pedestrian comfort value of 11 mph (more than 10% of the time) under existing conditions. These exceedances are generally located along the east side of 10th Street between Mission and Market and west of the project site along Mission Street.

Under existing plus project conditions winds would be slightly increased; the average wind speed for all test points would increase to 11.4 mph. Wind speeds in sidewalk pedestrian areas would range from 5 mph to 19 mph, compared with a range of 5 to 20 mph under existing conditions. The project would create one additional exceedance (location 7), while eliminating one existing exceedance (location 21). Twelve of the 27 test points would exceed the comfort criterion, same as for existing conditions.

Under the cumulative plus project scenario conditions winds would be increased (relative to project conditions); the average wind speed for all test points would increase to 12.4 mph. Wind speeds in sidewalk pedestrian areas would range from 7 mph to 23 mph, compared with a range of 5 to 19 mph under project conditions. The number of exceedances would be 16 compared to 12 for the project scenario.

Under the cumulative without project scenario, winds would be increased (relative to project conditions); the average wind speed for all test points would decrease to 11.9 mph. Wind speeds in sidewalk pedestrian areas would range from 6 mph to 22 mph, compared with a range of 5 to 19 mph under project conditions. The number of exceedances would be 15, compared to 12 for the project scenario.

Wind Hazard Criterion

Twenty-six of the 27 sidewalk test locations currently meet the wind hazard criterion. A single point (location 1, at the southwest corner of Market Street and 10th Street) exceeds the Planning Code's wind hazard criterion (speeds reaching or exceeding the hazard level of 26 mph, as averaged for a single full hour of the year) under existing conditions. The calculated duration of the existing exceedance is 94 hours per year.

The wind hazard exceedance at location 1 would continue to exist with the addition of the proposed project. The calculated duration of wind hazard exceedance at sidewalk locations would be 58 hours per year, compared with 94 hours per year under existing conditions.

The wind hazard exceedance at location 1 would continue to exist with the addition of the cumulative development and the proposed project. The calculated duration of wind hazard exceedance at sidewalk locations would be 109 hours per year, compared with 94 hours per year under existing conditions and 58 hours under project conditions.

The wind hazard exceedance at location 1 would continue to exist with cumulative development without the proposed project. The calculated duration of wind hazard exceedance at sidewalk locations would be 80 hours per year, compared with 94 hours per year under existing conditions and 58 hours under project conditions.

The above calculated hours of exceedance are subject to a high level of uncertainty. The calculation of the wind exceeded one hour per year in an area with very high winds is at the extreme end of the frequency curve where it increases exponentially, so small wind speed changes equate to large frequency changes, and the inherent uncertainty in measuring the wind is amplified by the volatility of the calculation procedure.

The location with the exceedances, location 1, is located at the southeast corner of the Market and 10th Street inter, which is upwind of the Project. Winds at the Tenth Street and Market Street intersection have been the subject of a number of wind tests and studies over the last decade. All tests conducted to date show a pattern of repeatability as to problematic locations, that is, the areas showing exceedances are consistent between tests, and the 10th Street/Market Street area has been consistently shown to be a high wind area generated by the Fox Plaza tower.

Recent wind tunnel tests conducted for the Tenth/Market/Mission Streets Mixed Use Project documented problems of limited repeatability of calculation of hours of exceedance in the vicinity of Market Street and 10th Street. While actual wind tunnel measurements have an uncertainty of about plus or minus 5 percent in terms of the measured windspeed ratios that are the basic output of the wind tunnel process, that 5 percent uncertainty in windspeed ratio can equate to a substantial number of hours of exceedance at windy locations because of the non-linearity of the wind frequency curve.

The Tenth/Market/Mission Streets Mixed Use project required a variance under Section

148 of the Planning Code. The background information prepared for the variance application stated:

“While experts have stated that the current wind tunnel methodology is generally accurate and reliable at lower wind velocities (such as those that approach or marginally exceed the level criterion of 11 mph), the higher wind velocity measurements (such as those approaching or exceeding hazardous levels) are less reliable and have larger margins of error. Margins of error for wind velocity measurements increase rapidly once such velocities reach hazard levels (26 mph or greater).”

Several wind tunnel studies have examined wind conditions near the Market Street/10th Street intersection under cumulative conditions. While these studies covered different measurement points (the grid of measurement points for each is centered on the project site and thus is not identical) the definition of the cumulative case was the same for all. The wind studies for the Tenth/Market Mission Streets Mixed Use project, the 1355 Market (SF Mart) project and the Fox Plaza Expansion project each included a cumulative run that indicated improvement in conditions near the 10th and Market Streets intersection compared to existing conditions. These findings were based on multiple measurements points within the high wind area of the 10th and Market Streets intersection rather than the single measurement point in this current study.

The proposed project is located a full block south and east of the Market Street/10th Street intersection that is a noted area of extreme winds. The current result that the wind hazard criterion is exceeded at the southeast corner of Market and 10th Streets (location 1) under existing conditions is consistent with all previous wind studies of this area. Given the 1415 Mission Street Project's downwind location with respect to the 10th and Market Intersection, the larger margin of error for calculation of hours of wind hazard exceedance at this location and the consistent result that cumulative development results in improvements of the wind hazard situation at the 10th/Market intersection, it is highly probable that the variation in the number of hours between the existing, project, cumulative with project and cumulative without project model runs does not represent a statistically significant change in hazardous winds, particularly since the statistics are for a single location.

Figure 2: Measurement Locations

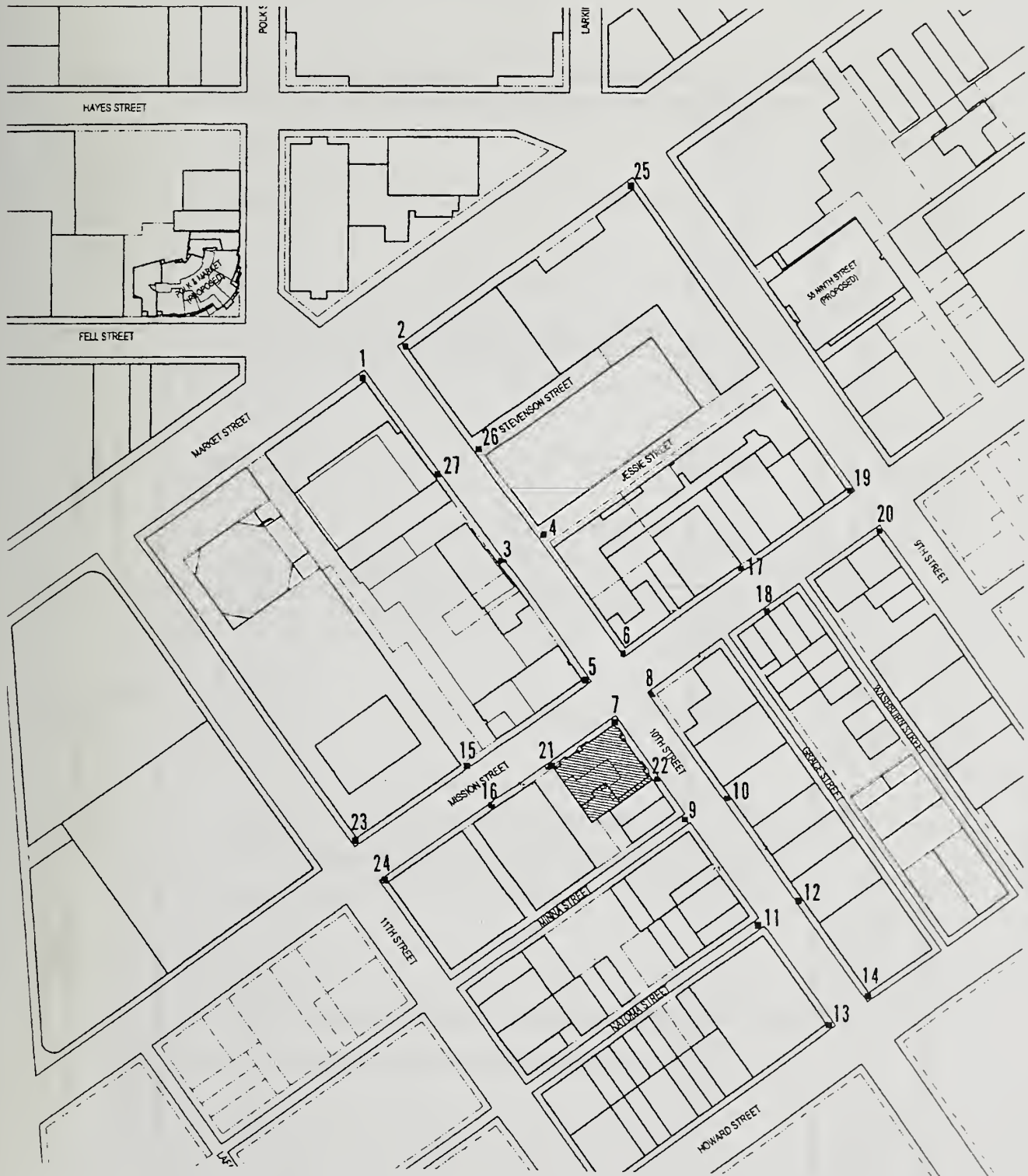


Table 2: Comfort Criterion Results

| References | Existing Setting | | | | | Project | | | | | Cumulative + Project | | | | | Cumulative + Existing | | | | |
|-------------------|------------------|-------------------------------|--------------------------------------|--|---|--------------------------------------|--|---|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|
| | Location Number | Comfort Criterion Speed (mph) | Measured Equivalent Wind Speed (mph) | Percent of Time Wind Speed Exceeds Criterion | Speed Change Relative to Existing (mph) | Measured Equivalent Wind Speed (mph) | Percent of Time Wind Speed Exceeds Criterion | Speed Change Relative to Existing (mph) | Measured Equivalent Wind Speed (mph) | Percent of Time Wind Speed Exceeds Criterion | Speed Change Relative to Project (mph) | Measured Equivalent Wind Speed (mph) | Percent of Time Wind Speed Exceeds Criterion | Speed Change Relative to Project (mph) | Measured Equivalent Wind Speed (mph) | Percent of Time Wind Speed Exceeds Criterion | Speed Change Relative to Project (mph) | Measured Equivalent Wind Speed (mph) | Percent of Time Wind Speed Exceeds Criterion | Speed Change Relative to Project (mph) |
| Average mph and % | 1 | 11 | 20 | 35 | -1 | 19 | 33 | -1 | 19 | 33 | -1 | 23 | 48 | -1 | 22 | 48 | -1 | 22 | 48 | -1 |
| | 2 | 11 | 15 | 23 | | 14 | 22 | | 14 | 22 | | 14 | 22 | | 14 | 22 | | 14 | 22 | |
| | 3 | 11 | 10 | 4 | | 9 | 3 | | 9 | 3 | | 13 | 19 | | 13 | 20 | | 13 | 20 | |
| | 4 | 11 | 17 | 30 | 1 | 18 | 31 | 1 | 18 | 31 | 1 | 14 | 21 | -4 | 13 | 19 | -4 | 13 | 19 | -4 |
| | 5 | 11 | 8 | 2 | 1 | 8 | 2 | 1 | 8 | 2 | 1 | 10 | 7 | 2 | 10 | 4 | 1 | 10 | 4 | 1 |
| | 6 | 11 | 12 | 12 | 12 | 12 | 14 | 12 | 12 | 14 | -2 | 10 | 6 | -2 | 10 | 6 | -2 | 10 | 6 | -2 |
| | 7 | 11 | 10 | 5 | 4 | 14 | 20 | 4 | 14 | 20 | 4 | 14 | 18 | | 12 | 13 | | 12 | 13 | |
| | 8 | 11 | 9 | 2 | 3 | 11 | 12 | 3 | 11 | 12 | 3 | 15 | 24 | 4 | 9 | 2 | -3 | 9 | 2 | -3 |
| | 9 | 11 | 8 | 4 | 1 | 9 | 6 | 1 | 9 | 6 | 1 | 9 | 4 | | 9 | 4 | | 9 | 4 | |
| | 10 | 11 | 8 | 3 | | 8 | 3 | | 8 | 3 | | 10 | 4 | 2 | 9 | 2 | 1 | 9 | 2 | 1 |
| | 11 | 11 | 9 | 5 | | 9 | 5 | | 9 | 5 | | 9 | 3 | | 9 | 3 | | 9 | 3 | |
| | 12 | 11 | 8 | 2 | | 8 | 2 | | 8 | 2 | | 9 | 3 | | 10 | 6 | 1 | 10 | 6 | 1 |
| | 13 | 11 | 9 | 6 | -1 | 8 | 6 | -1 | 8 | 6 | -1 | 7 | 5 | -1 | 9 | 6 | 1 | 9 | 6 | 1 |
| | 14 | 11 | 14 | 20 | | 14 | 20 | | 14 | 20 | | 14 | 22 | 1 | 14 | 21 | | 14 | 21 | |
| | 15 | 11 | 8 | 2 | | 8 | 2 | | 8 | 2 | | 10 | 5 | 2 | 9 | 3 | 1 | 9 | 3 | 1 |
| | 16 | 11 | 13 | 16 | -1 | 12 | 13 | -1 | 12 | 13 | -1 | 14 | 20 | 2 | 15 | 23 | 2 | 15 | 23 | 2 |
| | 17 | 11 | 5 | 1 | | 5 | 0 | | 5 | 0 | | 7 | 0 | 1 | 5 | 0 | | 5 | 0 | |
| | 18 | 11 | 10 | 9 | -1 | 10 | 7 | -1 | 10 | 7 | -1 | 10 | 5 | | 6 | 0 | -4 | 6 | 0 | -4 |
| | 19 | 11 | 11 | 9 | -1 | 10 | 7 | -1 | 10 | 7 | -1 | 12 | 12 | 2 | 11 | 9 | | 11 | 9 | |
| | 20 | 11 | 14 | 19 | -1 | 13 | 16 | -1 | 13 | 16 | -1 | 13 | 17 | | 14 | 23 | 1 | 14 | 23 | 1 |
| | 21 | 11 | 13 | 16 | -2 | 11 | 10 | -2 | 11 | 10 | -2 | 13 | 17 | 2 | 16 | 25 | 5 | 16 | 25 | 5 |
| | 22 | 11 | 6 | 0 | 2 | 8 | 3 | 2 | 8 | 3 | 2 | 8 | 1 | | 6 | 1 | -2 | 6 | 1 | -2 |
| | 23 | 11 | 18 | 37 | -1 | 17 | 34 | -1 | 17 | 34 | -1 | 19 | 39 | 2 | 19 | 38 | 1 | 19 | 38 | 1 |
| | 24 | 11 | 13 | 18 | | 13 | 19 | | 13 | 19 | | 14 | 21 | 1 | 15 | 24 | 2 | 15 | 24 | 2 |
| | 25 | 11 | 15 | 24 | | 15 | 26 | | 15 | 26 | | 17 | 34 | 2 | 19 | 39 | 3 | 19 | 39 | 3 |
| | 26 | 11 | 14 | 18 | -1 | 14 | 19 | -1 | 14 | 19 | -1 | 15 | 20 | 1 | 14 | 20 | | 14 | 20 | |
| | 27 | 11 | 10 | 6 | -1 | 9 | 4 | -1 | 9 | 4 | -1 | 14 | 22 | 5 | 13 | 19 | 4 | 13 | 19 | 4 |
| Average mph and % | | | | | | | | | | | | | | | | | | | | |
| | | | 11.3 mph | 11% | | 11.4 mph | 12% | | 11.4 mph | 12% | | 12.4 mph | 14% | | 11.9 mph | 13% | | 11.9 mph | 13% | |
| Exceedances | | | Total | 12 | | Total | 12 | | Total | 12 | | Total | 16 | | Total | 14 | | Total | 14 | |
| Counts | | | Existing | 12 | | Existing | 11 | | Existing or Project | 11 | | Existing or Project | 11 | | Existing or Project | 11 | | Existing or Project | 11 | |
| | | | | | | New, due to scenario | 1 | | New, due to scenario | 5 | | New, due to scenario | 5 | | New, due to scenario | 3 | | New, due to scenario | 3 | |
| | | | | | | New, at new location | 0 | | New, at new location | 0 | | New, at new location | 0 | | New, at new location | 0 | | New, at new location | 0 | |
| | | | | | | Eliminated | 1 | | Eliminated | 1 | | Eliminated | 1 | | Eliminated | 1 | | Eliminated | 1 | |

Table 3: Wind Hazard Criterion Results

| References | Existing Setting | | | | | Project | | | | | Cumulative + Project | | | | | Cumulative + Existing | | | | |
|-------------------|------------------|------------------------------|--------------------------------------|--|---|--------------------------------------|--|---|---|--------------------------------------|--|----------------------------------|---|--------------------------------------|--|----------------------------------|---|--|--|--|
| | Location Number | Hazard Criterion Speed (mph) | Measured Equivalent Wind Speed (mph) | Hours per year Wind Speed Exceeds Hazard Criterion | | Measured Equivalent Wind Speed (mph) | Hours per year Wind Speed Exceeds Hazard Criterion | Hours Change Relative to Existing Setting | | Measured Equivalent Wind Speed (mph) | Hours per year Wind Speed Exceeds Hazard Criterion | Hours Change Relative to Project | | Measured Equivalent Wind Speed (mph) | Hours per year Wind Speed Exceeds Hazard Criterion | Hours Change Relative to Project | | | | |
| | 1 | 36 | 50 | 9.4 | e | 48 | 38 | -36 | e | 51 | 109 | 51 | e | 49 | 80 | 22 | e | | | |
| | 2 | 36 | 25 | | | 26 | | | | 24 | | | | 24 | | | | | | |
| | 3 | 36 | 16 | | | 16 | | | | 24 | | | | 25 | | | | | | |
| | 4 | 36 | 31 | | | 31 | | | | 21 | | | | 25 | | | | | | |
| | 5 | 36 | 17 | | | 17 | | | | 21 | | | | 18 | | | | | | |
| | 6 | 36 | 21 | | | 21 | | | | 17 | | | | 17 | | | | | | |
| | 7 | 36 | 18 | | | 23 | | | | 26 | | | | 22 | | | | | | |
| | 8 | 36 | 15 | | | 21 | | | | 29 | | | | 15 | | | | | | |
| | 9 | 36 | 23 | | | 25 | | | | 25 | | | | 26 | | | | | | |
| | 10 | 36 | 20 | | | 20 | | | | 17 | | | | 15 | | | | | | |
| | 11 | 36 | 24 | | | 23 | | | | 18 | | | | 19 | | | | | | |
| | 12 | 36 | 15 | | | 18 | | | | 18 | | | | 18 | | | | | | |
| | 13 | 36 | 32 | | | 32 | | | | 28 | | | | 28 | | | | | | |
| | 14 | 36 | 25 | | | 24 | | | | 25 | | | | 25 | | | | | | |
| | 15 | 36 | 21 | | | 23 | | | | 17 | | | | 17 | | | | | | |
| | 16 | 36 | 24 | | | 23 | | | | 25 | | | | 26 | | | | | | |
| | 17 | 36 | 19 | | | 16 | | | | 14 | | | | 15 | | | | | | |
| | 18 | 36 | 20 | | | 18 | | | | 18 | | | | 12 | | | | | | |
| | 19 | 36 | 24 | | | 25 | | | | 31 | | | | 31 | | | | | | |
| | 20 | 36 | 26 | | | 24 | | | | 28 | | | | 31 | | | | | | |
| | 21 | 36 | 24 | | | 20 | | | | 25 | | | | 29 | | | | | | |
| | 22 | 36 | 14 | | | 21 | | | | 15 | | | | 16 | | | | | | |
| | 23 | 36 | 32 | | | 30 | | | | 34 | | | | 32 | | | | | | |
| | 24 | 36 | 26 | | | 27 | | | | 29 | | | | 30 | | | | | | |
| | 25 | 36 | 32 | | | 33 | | | | 34 | | | | 35 | | | | | | |
| | 26 | 36 | 26 | | | 24 | | | | 36 | | | | 32 | | | | | | |
| | 27 | 36 | 20 | | | 19 | | | | 30 | | | | 27 | | | | | | |
| Average mph and % | | | | | | 24 mph | 9.4 hr | | | 25 mph | 109 hr | 51 hr | | 24 mph | 80 hr | 22 hr | | | | |
| Exceedances Count | | | | | | Total | Existing | | | Total | Existing | 0 | | Total | Existing | 0 | | | | |
| | | | | | | 1 | 1 | | | 0 | 0 | 0 | | 0 | 0 | 0 | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

V. RECOMMENDATIONS

The project includes a rooftop terrace that will generally be windy. This terrace should be landscaped to reduce wind and improve usability. Porous materials or structures (vegetation, hedges, screens, latticework, perforated or expanded metal) offer superior wind shelter compared to a solid surface. Wind sheltering elements should have sufficient height to shelter the area in question (wind shadows behind porous wind screens or shelter belts provide shelter a distance downwind equivalent to 3-5 times the height of the wind screen). Outdoor furniture and any landscape structures should be firmly attached to the ground or buildings to resist being blown over.

1. Arens, E., "Designing for Acceptable Wind Environment," Transactions Engineering Journal, ASCE 107, No. TE 2, 1981, pp. 127-141.
2. Edward Arens, Designing for an Acceptable Wind Environment, Transportation Engineering Journal, March 1981.
3. E. Jan Null, Climate of San Francisco, Report No. NOAA-TM-NWS WR-126, 1978.

PAGE INTENTIONALLY LEFT BLANK

MEMORANDUM

TO: CAROL ROOS

FROM: DON BALLANTI, BILL WAECHTER

SUBJECT: 1415 MISSION STREET WIND TUNNEL RESULTS

DATE: FEBRUARY 18, 2009

Executive Summary

Winds at the intersection of Tenth and Market Streets have been the subject of several wind tunnel tests in recent years. The purpose of this memorandum is to interpret the results of the 1415 Mission Street wind tunnel test in light of previous studies and the known limitations of the wind tunnel model. Based on our review of studies in the area and expertise in studies of this type, we have concluded the following:

- Both wind tunnel and computer simulation studies have consistently shown that the strong winds at the Market Street/10th Street intersections are attributable the effects of the Fox Plaza structure that accelerate and channel winds down Market Street and south on 10th Street.
- In extremely windy areas such as the Market Street/10th Street intersection, there are difficulties using wind tunnel results alone to determine compliance with the wind hazard criterion, and the calculated number of hours of exceedance derived from wind tunnel tests is unreliable as a precise indicator of project impact.
- Our experience, including the above, suggests that wind conditions at the 10th and Market intersection should not be noticeably influenced by 1415 Mission. The variation in the number of hours of exceedance when the project is added to the existing setting or the cumulative setting in our opinion does not represent an impact of the project, but should be attributed to measurement and calculation uncertainty.

Summary of Wind Tunnel Test Results

Wind tunnel tests for the 1415 Mission Street project were conducted in early 2007. The tests were for twenty-seven sidewalk locations. The extent of measurements was along 10th Street from Market Street to Howard Street, and along Mission Street from 11th Street to 9th Street, and one location at the southwest corner of Ninth and Market Streets. These measurement points represented locations where the project was considered to have the potential to significantly change wind conditions as well as locations where tests of other projects had found wind problems (for example, the locations at Market Street and 10th Street and 9th Street).

The tests included four testing scenarios: existing conditions; existing-plus-project; and two cumulative runs. The first cumulative run was performed with the proposed 1415 Mission Street project, and the second without. Cumulative development consisted of the following projects in close proximity to the project site:

- 1177 Market Street project
- 1125 Market Street project
- Mercy residential project on Mission Street (between Ninth and Tenth Streets)
- 77 Van Ness Avenue project
- 1 Polk project
- 55 Ninth Street project
- Fox Plaza project on Market Street
- 10th/Market Project (now known as the Market Street Residential Building)
- 1400 Mission Street Project (previously known as the TNDC Housing Project)
- 1355 Market Street project

Of the 27 sidewalk test locations, 26 were found to meet the wind hazard criterion under all four scenarios tested. A single point at the southwest corner of Market Street and 10th Street was predicted to exceed the wind hazard criterion (speeds reaching or exceeding the hazard level of 26 mph, as averaged for a single full hour of the year). The exceedance was predicted to exist for all four testing scenarios, but the number of hours per year that the wind hazard criterion was predicted was different for all four testing scenarios.

The calculated duration of the exceedance under existing conditions was calculated as 94 hours per year. The calculated duration of wind hazard exceedance with the addition of the proposed 1415 Mission Street project was 58 hours per year.

The wind hazard exceedance at location 1 would continue to exist with the addition of the cumulative development and the proposed project. The calculated duration of wind hazard exceedance with cumulative development and the proposed project was 109 hours per year. The cumulative scenario without the proposed project had a predicted duration of exceedance of 80 hours per year.

If the hours of exceedance are taken at face value, the project would seem to have an inconsistent impact on wind. When added to the existing setting, the number of hours of exceedance declines, suggesting the project reduces wind at the southwest corner of Market and Tenth Streets. However, when added to the existing plus cumulative setting the number of hours of exceedance increases, suggesting the project increases wind at the southwest corner of Market and Tenth Streets.

These seemingly contradictory results must be interpreted in light of the reliability of the wind tunnel methodology at high wind locations such as the Market Street/10th Street intersection, the results of numerous other wind tunnel tests (and computational tests) that have studied Market Street/10th Street intersection wind conditions and the likely extent of wind impacts that could be expected for a project located at the southwest corner of Mission and 10th Streets.

Uncertainty in Predicting Hours of Exceedance at the Market Street/10th Street Intersection

To account for the differences between the hazard criterion, which specifies an hourly-averaged wind of 26 miles per hour, and the historical wind data base, which consists of 3-minute averaged winds, the testing methodology uses measured wind tunnel data, in the form of a ratio, to calculate an ambient wind that would result in a predicted wind of 36 mile per hour, (The frequency of a 3-minute averaged wind of 36 miles per hours is identical to that of a 26 miles per hour wind averaged over 1-hour). The computer program then "looks up" the frequency of this occurrence on what is essentially a graph of wind speed versus frequency. The graph is based on the 6-year historical wind data base for a downtown location.

The calculation of wind frequency in an area with very high winds uses a very steep part of the frequency curve, which means that small wind speed changes equate to large frequency changes, and the inherent uncertainty in measuring the wind (due to limited precision of the measuring equipment, uncertainty in location and orientation of the probe, differences in ambient conditions in the tunnel, inaccuracies in aligning the model, etc.) is amplified by the volatility of the calculation procedure.

Winds at the Tenth Street and Market Street intersection have been the subject of a number of wind tests and studies over the last decade. Winds at this intersection are accelerated by existing structures that tend to channel winds along Market Street and south along Tenth Street and all wind tunnel tests conducted to date have shown exceedances of the wind hazard criterion at this location. However, the calculated number of hours of exceedance in these independent tests varied widely for similar scenarios, with a range of several hundred hours per year at the same test location. Substantial variation in hours of exceedance has been found for identical existing conditions runs as well for identical cumulative scenario runs.

The Variance Decision for the Market Street Residential Project at the southwest corner of Market and 10th Streets summarized the situation as follows:

“While experts have stated that the current wind tunnel methodology is generally accurate and reliable at lower wind velocities (such as those that approach or marginally exceed the level criterion of 11 mph), the higher wind velocity measurements (such as those approaching or exceeding hazardous levels) are less reliable and have larger margins of error. Margins of error for wind velocity measurements increase rapidly once such velocities reach hazard levels (26 mph or greater).”¹

The margin of error at the southwest corner of Market and 10th Streets is relatively large, as the wind speed exceeded 1 hour per year is over 50 mph. While the calculated number of hours of exceedance between wind tunnel tests may show such a wide variation that the calculated number of hours may not be reliable, the pattern that emerges from considering all these tests is far more dependable. Several wind tunnel studies have examined wind conditions near the Market Street/10th Street intersection. These studies include the Tenth/Market Mission Streets Mixed Use project, the 1355 Market (SF Mart) project and the Fox Plaza Expansion project. Each included a cumulative run that included all the same buildings, including the 1415 Mission project.² The consistent findings of all these studies are:

- The Market Street/10th Street intersection is affected by winds well above the wind hazard criterion generated by the Fox Plaza building located on the north side of Market Street.

¹ San Francisco Planning Department. Variance Decision for the 1407-1435 Market Street Project. June 28, 2007.

² For the Fox Plaza Expansion project the 1 Polk Street project was considered as part of the existing environment rather than a cumulative project.

- The addition of cumulative projects results in a reduction in wind and reduction in the number of hours of exceedance.

Computer Simulation Studies

Rowan Williams Davies & Irwin Inc. (RWDI) (Guelph, Ontario, Canada) prepared a wind study of the 10th/Market Project (now known as the Market Street Residential Building) using computer simulation techniques. The results of these simulations are graphical representations of wind fields that show areas of low and high wind through color. This methodology was ultimately used and accepted as a means of qualitatively comparing the effects on the wind of adding the proposed 10th/Market Project. The study focused on the key wind direction, west-northwest, which was identified as the critical direction with respect to hazard winds at the intersection of 10th and Market Streets.

The computer modeling technique provides a consistent, repeatable means of qualitatively comparing one building test configuration against another. All external influences associated with the wind tunnel testing method (e.g., precise re-positioning of probe, instrumentation drift, temperature, model position/orientation, etc.) are eliminated as possible sources of anomaly in obtaining repeatable readings.

The results of the computer modeling study were submitted in RWDI's August 11, 2006 report³, with a supplementary assessment of cumulative conditions submitted to the City of San Francisco Planning Department on May 17, 2007⁴. The cumulative development configuration included: 55 Ninth Street, Mercy Housing (NE corner of 10th and Mission), and the TDNC Family Housing (NW corner of 10th and Mission, now known as 1400 Mission Street Project) tested at height of 85 ft and also 150 ft. Because the computer model's main focus was the proposed 10th/Market Project (and the 10th/Market intersection), more distant developments near the edge of the computer model (e.g., 1415 Mission Street), were not included in the model. Such distant and generally downwind developments were not anticipated to influence wind conditions at the 10th and Market intersection.

³ A. Akomah, M.E.Sc, Project Engineer, A. Belanger, Project Manager and B. Waechter, C.E.T., Project Director (Senior Microclimate Specialist). Pedestrian Wind Flow Assessment 10th and Market Street Development. San Francisco, CA. RWDI Reference 06-1420, dated August 11, 2006.

⁴ A. Akomah, M.E.Sc, Project Engineer, A. Belanger, Project Manager and B. Waechter, C.E.T., Project Director (Senior Microclimate Specialist). Pedestrian Wind Flow Assessment Supplementary Results of Cumulative Conditions. 10th and Market Street Development. San Francisco, CA. RWDI Reference 07-1408, dated May 17, 2007.

The supplementary study of the cumulative wind impacts concluded that for the key west-northwest wind direction:

“wind speeds in the vicinity of 10th and Market and also 10th and Mission do not noticeably change for either of the cumulative configurations”.

While this result contrasts with the results of the calculation method cited on page 2-3 of this memo, the calculation method is at times inconsistent in its outcomes in some situations, as noted earlier.

The above computational findings have great significance with respect to the influence one would expect the proposed 1415 Mission Street development to have on the wind conditions at 10th and Market. The computational study for Tenth/Market focused on development much closer to the 10th and Market Street intersection than the proposed project at 1415 Mission Street. It showed that wind conditions at the intersection were largely controlled by the Fox Plaza Building, which accelerates and channels winds down Market and Tenth Street, and that even large buildings proposed at the intersection were not expected to create significant changes in wind in this area. The TNDC Family Housing, which is directly across the 1415 Mission Street site and closer to the intersection in question, did not noticeably change the wind speeds at 10th and Market when tested at 85 ft and 150 ft. In our opinion, we would also expect a similar result for 10th and Market with the proposed 1415 Mission Street development present, especially when the TNDC Housing project will partly shelter 1415 Mission from approaching west-northwest winds. This opinion is confirmed in the supplementary study's conclusion where it acknowledged that the cumulative development configuration also had a minimal effect at the intersection of 10th and Mission, adjacent to 1415 Mission.

It is difficult to directly compare computer modeling results with the wind tunnel results as, for example, the extent of the area modeled differed as did the presence/absence of peripheral cumulative buildings. However, there is no doubt in reviewing the results of all the test configurations for the two test methodologies that both the wind tunnel and computer modeling approaches concluded that the 10th and Market intersection is an inherently windy area where existing wind speeds are high and are not predicted to increase significantly as a result of new development, especially downwind development such as the 1415 Mission project.

Findings and Conclusion

In our view, another wind tunnel test would not resolve the matter. Due to the variability of results inherent in the methodology in the vicinity of the Market Street and 10th Street intersection, it would simply introduce another different data set subject to the same limitations as previous data sets.

We make the following findings:

- Wind at the south side of the Market Street/10th Street intersection appears to be controlled largely by the Fox Plaza Building that accelerates and channels winds down Market Street and south on 10th Street. Wind tunnel tests and computational simulations are consistent in showing that even large buildings proposed at the Market Street/10th Street intersection change the problem wind conditions very little.
- The calculated number of hours of exceedance derived from wind tunnel tests, at the Market Street/10th Street intersection is unreliable as an indicator of project impact. However, the numerous wind tunnel studies conducted in the area are consistent in showing that the effect of cumulative projects is a small reduction in hours of exceedance at the Market Street/10th Street intersection.
- Our 35 years of environmental wind and wind engineering experience suggest that wind conditions at the 10th and Market intersection should not be noticeably influenced by 1415 Mission. Wind impacts propagate downwind from a building, and the Market Street/10th Street intersection is too far upwind of the proposed 1415 Mission project for it to exert a significant change in winds at this location.

Based on the above findings, it is our conclusion that the project would not substantially affect wind at the Market Street/10th Street intersection, which is a full block upwind of the project site. The wind tunnel tests for the project are consistent with previous wind tunnel studies in showing high winds and exceedances of the wind hazard criterion at the southwest corner of the Market Street/10th Street intersection. However, the variation in the number of hours of exceedance when the project is added to the existing setting or the cumulative setting in our opinion does not represent an impact of the project, but should be attributed to measurement and calculation uncertainty (the calculated changes represent "noise" that is within the margin of error).

In closing, we have concluded that neither the reduction in calculated hours of exceedance between the existing and project scenarios, nor the increase in calculated

hours of exceedance between the cumulative and cumulative plus project scenarios should be considered as being caused by the proposed project alone. Given the disproportionate sensitivity of the calculation of the number of hours of exceedance described earlier, this variation should be considered as being within the margin of error for the calculation procedure.

PLACE
POSTAGE
HERE

San Francisco Planning Department
Major Environmental Analysis
1650 Mission Street, Ste. 400
San Francisco, CA 94103

Attn: Carol Roos, Environmental Planner
2005.0540E 1415 Mission Street Mixed-
Use Development

PLEASE CUT ALONG THE DOTTED LINE

*RETURN REQUEST REQUIRED FOR FINAL
ENVIRONMENTAL IMPACT REPORT*

REQUEST FOR FINAL ENVIRONMENTAL IMPACT REPORT

TO: Carol Roos, Environmental Planner
San Francisco Planning Department, MEA

Check one box: ☐ Please send me a copy of the Final EIR on a CD.
☐ Please send me a paper copy of the Final EIR.

Please send me a copy of the Final EIR.

Signed: _____

Print Your Name and Address in the Box Below

| |
|--|
| |
|--|

